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SEP 25 1916

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Gleanings in Bee Culture

Special Bargains in Shipping-cases

With the bountiful crop of honey being gathered there will be need for shipping-cases in which to place the comb honey for market. During the past few years we have made several changes in the style of our cases, and have some stock of styles formerly made, but not now listed in our catalog. There are some people who prefer the older styles to the later ones, and there may be others who would use the older styles if bought at a low price, and prompt delivery were made. We have on hand the following stock which we offer, to close out and subject to previous sale, at the special prices here named:

- 4 crates of 50 each, 9½-inch, 2-row, at \$4.00 per crate.
- 19 crates of 50 each 10-inch, 2-row, at \$4.00 per crate.
- 15 crates of 50 each, 6¼-in. 3-row, at \$4.00 per crate.
- 56 crates of 50 each, 12-pound cases, at \$4.00 per crate.

All of the above have either 2 or 3 inch glass, and take 12 sections 4¼x4¼x1½ plain.

There are also for the same size section, packed 10 in a crate:

- 10 crates of 10 each, 9½-in. 2-row at 85 cts. per crate.
- 4 crates of 10 each, 6¼-inch, 2-row, at 85 cts. per crate.
- 4 crates of 10 each, 10-inch, 2-row, at 85 cts. per crate.

For the 4¼x1½ beeway section we have:

- 4 crates of 50 each, 15¼-inch 2-row, for 15 sections, at \$4.50 per crate.
- 6 crates of 10 each, 15¼-inch, 2-row, for 15 sections, at 95 cts. per crate.
- 12 crates of 50 each, 11¾-inch, 2-row, for 12 sections, at \$4.00 per crate.
- 6 crates of 10 each, 12-lb. safety cases with cartons at \$1.20 per crate.
- 3 crates of 10 each, 8-inch, 3-row, for 12 sections, at 85 cts. per crate.
- 2 crates of 10 each, 12-inch, 4-row, for 24 sections, at \$1.80 per crate.

For 24 sections, 4¼x1½ plain:

- 2 crates of 10 each, 9½-inch, 4-row, at \$1.75 per crate.
- 3 crates of 10 each, 10-inch, 4-row, at \$1.75 per crate.

For 12 sections 4x5x1¾:

- 26 crates of 50 each 3-row cases, at \$4.00 per crate.

ADDITIONAL SHIPPING-CASES AT BRANCH OFFICES.

At Washington, D. C.

- 3 cases, 10 each, 12-lb. cases for 4¼x1¾ sections, at 85 cts. each.
- 7 cases, 10 each, 12-lb. cases for 4¼x1½ sections, at 85 cts. each.
- 3 crates, 50 each, 12-lb. cases for 3¾x5x1½-inch sections at \$4.00 per crate.

At Mechanic Falls, Me.

- 5 packages, 10 each, 12-lb. safety-cases for 4¼x1¾ sections, including safety carton, at \$1.20 per crate.
- 2 crates, 10 each, 12-lb. cases for 4¼x1½ sections at 85 cts. per crate.
- 3 crates, 10 each, 12-lb. cases for 3¾x5x1½ sections at 85 cts. per crate.
- 1 crate, 10 each, 12-lb. cases for 4x5x1¾ sections at 85 cts. per crate.
- 2 crates of 10 each, 12-lb. safety cases for 4x5x1¾ sections, including safety cartons \$1.20 per crate.

At New York Branch.

- 1 crate 50 2-row and 1 crate of 50 3-row 12-lb. cases for 4¼x1¾ sections at \$4.00 per crate.

At Philadelphia Branch.

- 8 crates, 50 each, 12-lb. cases for 4¼x1½ sections at \$4.00 per crate.
- 10 crates of 10 each, same, at 85 cts. each.
- 13 crates, 50 each, 12-lb. cases for 4¼x1½ sections at \$4.00 per crate.
- 9 crates, 10 each, same, at 85 cts. per crate.
- 4 crates, 50 each, 24-lb. cases for 4¼x1½ sections at \$8.00 per crate.
- 4 crates, 10 each, same, at \$1.70 per crate.
- 4 crates, 50 each, 16-lb. cases for 4¼x1¾ sections at \$4.50 per crate.
- 7 crates, 50 each, 12-lb. cases for 3¾x5x1½ sections, at \$4.00 per crate.
- 5 crates, 10 each, same, at 85 cts. per crate.

We also offer the following glass jars, to close out at special prices, subject to previous sale.

At Mechanic Falls, Me.

- 5 gross ½-lb. square jars, with corks, at \$4.00 per gross.
- 29 cases of 2 dozen each, Simplex or Federal 1-lb. jars at \$1.10 per case.

At Philadelphia Branch.

- 1 gross ¼-lb. square jars with cork, at \$3.25.
- 10 cases ¼-lb. square jars with cork, 75 cts. case of 2 dozen.
- 1 gross ½-lb. square jars with cork, at \$4.00.
- 8 cases ½-lb. square jars with cork, 90 cts. case of 2 dozen.
- 4 gross 1-lb. square jars with cork, \$5.00.
- 3 cases 1-lb. square jars with cork, \$1.10 case of 2 dozen.
- 5 gross 2-lb. square jars with cork, at \$7.50.
- 37 cases 1-lb. Simplex jars, 2 dozen per case, at \$1.30.

At New York Branch.

- 4 bbls. of 7-oz. tumblers, 24 doz. to barrel, at \$5.60 per barrel.
- 11 gross of 2-lb. square jars with cork, 6 dozen to case at \$7.50 per gross, \$4.00 per case.
- 13 cases of 2 dozen each ½-lb. square jars with cork, at 90 cts. per case.

At Washington, D. C.

- 3 bbl. 12 dozen 1-lb. Simplex jars at \$5.25 per bbl.
- 1 bbl. 12 dozen 1-lb. No. 25 jars at \$5.00 per bbl.
- 2 crates 12 dozen 1-lb. Simplex jars at \$5.00 per crate.
- 1 case 2 dozen 1-lb. Simplex jars at \$1.10 per case.

These are fine for exhibition purposes.

- 4 dozen ½-lb. Herschiser jars with nickel tops at 50 cts. a dozen.
- 11 doz. 1-lb. square Herschiser jars with nickel tops at 65 cts. a dozen.

THE A. I. ROOT COMPANY, Medina, Ohio

SHIPPING-CASES FOR COMB HONEY

Don't make the mistake of putting a fine lot of section honey in poor shipping-cases. It will lower the price to you and damage your future sales. "Falcon" cases are A No. 1, and will be a credit to any crop of honey. Prices are as follows:

Shipping-cases in Flat, without Glass.

No. 1....holding 24 sections, $4\frac{1}{4} \times 1\frac{1}{8}$, showing 4.....	10,	\$2.00;	100,	\$18.00
No. 3....holding 12 sections, $4\frac{1}{4} \times 1\frac{1}{8}$, showing 3.....	10,	\$2.00;	100,	\$18.00
No. 1½....holding 24 sections, $4\frac{1}{4} \times 1\frac{1}{8}$, showing 4.....	10,	\$1.90;	100,	\$17.00
No. 6....holding 24 sections, $3\frac{3}{4} \times 5 \times 1\frac{1}{2}$, showing 4.....	10,	\$1.80;	100,	\$16.00
No. 8....holding 24 sections, $4 \times 5 \times 1\frac{1}{2}$, showing 4.....	10,	\$1.80;	100,	\$16.00

Shipping-cases with Glass.

	with 3-inch glass	with 2-inch glass
No. 11....Same as No. 1.... Nailed, 35c; in flat, 1, 25c; 10,	\$2.30;	100, \$21.00.....
No. 13....Same as No. 3.... Nailed, 22c; in flat, 1, 15c; 10,	\$1.40;	100, \$12.50.....
No. 11½....Same as No. 1½.... Nailed, 35c; in flat, 1, 25c; 10,	\$2.20;	100, \$20.00.....
No. 16....Same as No. 6.... Nailed, 30c; in flat, 1, 22c; 10,	\$2.10;	100, \$19.00.....
No. 18....Same as No. 8.... Nailed, 30c; in flat, 1, 22c; 10,	\$2.10;	100, \$19.00.....

Red Catalog, postpaid.

Dealers Everywhere.

"Simplified Beekeeping," postpaid.

W. T. FALCONER MFG. COMPANY, FALCONER, NEW YORK

where the good beehives come from.

GRADING RULES OF THE A. I. ROOT CO., MEDINA, OHIO.

In harmony with the Federal net-weight regulations and the statutes of many states all comb honey we handle is figured with the weight of the section box as well as the case excluded. To get the net weight, deduct the weight of the empty case and 1 lb. 8 oz. for the weight of 24 sections (1 oz. each).

COMB HONEY.

Extra Fancy.—Sections to be evenly filled, combs firmly attached to the four sides, the sections to be free from propolis or other pronounced stain, combs and cappings white, and not more than six unsealed cells on either side. No section in this grade to weigh less than 14 oz. net. Cases must average not less than 22 lbs. net.

Fancy.—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain; comb and cappings white, and not more than six unsealed cells on either side exclusive of the outside row. No section in this grade to weigh less than 13 oz. net. Cases must average not less than 21 lbs. net.

No. 1.—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain; comb and cappings white to slightly off color, and not more than 40 unsealed cells, exclusive of the outside row. No section in this grade to weigh less than 11 oz. Cases must average not less than 20 lbs. net.

No. 2.—Combs not projecting beyond the box, attached to the sides not less than two-thirds of the way around, and not more than

60 unsealed cells exclusive of the row adjacent to the box. No section in this grade to weigh less than 10 oz. net. Cases must average not less than 18 lbs. net.

CULL COMB HONEY.

Cull honey shall consist of the following: Honey packed in soiled second-hand cases or that in badly stained or propolized sections; sections containing pollen, honey-dew honey, honey showing signs of granulation, poorly ripened, sour or "weeping" honey; sections with combs projecting beyond the box or well attached to the box less than two-thirds the distance around its inner surface; sections with more than 60 unsealed cells, exclusive of the row adjacent to the box; leaking, injured, or patched-up sections; sections weighing less than 10 oz. net.

EXTRACTED HONEY.

This must be well ripened, weighing not less than 12 lbs. per gallon. It must be well strained; and, if packed in five-gallon cans, each can shall contain sixty pounds. The top of each five-gallon can shall be stamped and labeled, "Net weight not less than 60 lbs." Bright clean cans that previously contained clean light honey may be used for extracted honey.

EXTRACTED HONEY NOT PERMITTED IN SHIPPING GRADES.

Extracted honey packed in second-hand cans, except as permitted above.

Unripe or fermenting honey, or weighing less than 12 lbs. per gallon.

Honey contaminated by excessive use of smoke.

Honey contaminated by honey-dew.

Honey not properly strained.

GRADING RULES OF THE COLORADO HONEY-PRODUCERS' ASSOCIATION, DENVER, COL.,
FEBRUARY 6, 1915.

COMB HONEY.

FANCY.—Sections to be well filled, combs firmly attached on all sides and evenly capped except the outside row next to the wood. Honey, comb, and cappings white, or slightly off color; combs not projecting beyond the wood; sections to be well cleaned. No section in this grade to weigh less than 11 oz. net or 13½ gross. The top of each section in this grade must be stamped, "Net weight not less than 1½ oz."

The front sections in each case must be of uniform color and finish, and shall be a true representation of the contents of the case.

NUMBER ONE.—Sections to be well filled, combs firmly attached, not projecting beyond the wood, and entirely capped except the outside row next to the wood. Honey, comb, and cappings from white to light amber in color; sections to be well cleaned. No section in this grade to weigh less than 11 oz. net or 12 oz. gross. The top of each section in this grade must be stamped, "Net weight not less than 11 oz." The front sections in each case must be of uniform color and finish, and shall be a true representation of the contents of the case.

NUMBER TWO.—This grade is composed of sections that are entirely capped except row next to the wood, weighing not less than 10 oz. net or 11 oz. gross; also of such sections as weigh 11 oz. net or 12 oz. gross, or more, and have not more than 50 uncapped cells all together, which must be filled with honey; honey, comb, and cappings from white to amber in color; sections to be well cleaned. The top of each section in this grade must be stamped "Net weight not less than 10 oz." The front sections in each case must be of uniform color and finish, and shall be a true representation of the contents of the case.

Comb honey that is not permitted in shipping grades

Honey packed in second-hand cases.
Honey in badly stained or mildewed sections,
Honey showing signs of granulation.
Leaking, injured, or patched-up sections.
Sections containing honey-dew.
Sections with more than 50 uncapped cells, or a less number of empty cells.
Sections weighing less than the minimum weight.
All such honey should be disposed of in the home market.

EXTRACTED HONEY.

This must be thoroly ripened, weighing not less than 12 pounds per gallon. It must be well strained and packed in new cans; sixty pounds shall be packed in each five-gallon can, and the top of each five-gallon can shall be stamped or labeled, "Net weight not less than 60 lbs."

Extracted honey is classed as white, light amber, and amber. The letters "W," "L. A," "A" should be used in designating color; and these letters should be stamped on top of each can. Extracted honey for shipping must be packed in new substantial cases of proper size.

STRAINED HONEY.

This must be well ripened, weighing not less than 12 pounds per gallon. It must be well strained; and, if packed in five-gallon cans, each can shall contain sixty pounds. The top of each five-gallon can shall be stamped and labeled, "Net weight not less than 60 lbs." Bright clean cans that previously contained honey may be used for strained honey.

Honey not permitted in shipping grades.

Extracted honey packed in second-hand cans.
Unripe or fermenting honey weighing less than 12 lbs. per gallon.
Honey contaminated by excessive use of smoke.
Honey contaminated by honey-dew.
Honey not properly strained.

YOU DON'T WAIT FOR MONEY WHEN YOU SHIP MUTH YOUR HONEY

We Remit the Day Shipments Arrive.

We are in the market to buy **FANCY AND NUMBER ONE WHITE COMB HONEY**, in no-drip glass front cases. Tell us what you have to offer and name your price delivered here.

Will also buy—

White Clover extracted and Amber extracted.

A few cars of California Water White Sage.

A few cars of California Orange Blossom.

When offering extracted honey mail us a sample and give your lowest price delivered here, we buy every time you name a good price.

We do beeswax rendering; ship us your old combs and cappings. Write us for terms.

THE FRED. W. MUTH CO.
"THE BUSY BEE MEN"

204 Walnut Street.

CINCINNATI, O.

WARDELL'S ITALIANS

Descendents from the Famous Root \$200 Queen

I was head queen-breeder for The A. I. Root Co. for a number of years, and during that time I originated the famous \$200 ROOT BREEDER whose stock has gone the world around. These bees for GENTLENESS, GENERAL VIGOR, and HONEY-GATHERING qualities have ESTABLISHED A REPUTATION. I have been for years developing and perfecting this same strain. While my prices may be higher than some others, my queens are cheap in comparison with their value.

Untested	September and October, \$1.00	Tested	September and October, \$2.00
Select Untested	" " " " 1.25	Select Tested	" " " " 3.00

Our supply of untested and select untested is likely to be small after October.

Prompt delivery assured.
Address all orders to

F. J. Wardell, Uhrichsville, Ohio



Queens--Queens--Queens. We are breeding from the best three-band Italian stock. Untested, 50 cts.; select untested, 60 cts.; tested, \$1.00; select tested, \$1.50 each. We have been breeding queens for more than 25 years. We guarantee safe arrival, no disease, and every one purely mated.

W. J. FOREHAND & SONS

FORT DEPOSIT, ALABAMA



QUEENS

Quirin's Improved Superior Italian Bees and Queens. They are Northern Bred and Hardy. . . Over 20 Years a Breeder.

PRICES	Before July 1st			After July 1st		
	1	6	12	1	6	12
Select untested....	1.00	5.00	9.00	.75	4.00	7.00
Tested	1.50	8.00	15.00	1.00	5.00	9.00
Select tested	2.00	10.00	18.00	1.50	8.00	15.00
2-comb nuclei	2.50	14.00	25.00	2.25	12.00	22.00
3-comb nuclei	3.50	20.00	35.00	3.25	18.00	32.00
8-frame colonies...	6.00	30.00		5.00	25.00	
10-frame colonies ..	7.50	38.00		6.50	32.00	
1-2 lb pkg. bees ...	1.50	7.00		1.00	5.00	
1-lb. pkg. bees.....	2.00	10.00		1.50	8.00	

BREEDERS.—The cream selected from our entire stock of outyards; nothing better. These breeders, \$5.00 each.

Can furnish bees on Danzenbaker and L. or Hoffman frames.

Above price on bees by pound, nuclei, and colonies does not include queen. You are to select such queen as you wish with the bees, and add the price.

Queens from now on are mailed promptly by return mail.

Free circular and testimonials.

H. G. Quirin-the-Queen-breeder
Bellevue, Ohio

ITALIAN QUEENS

Untested remainder of the season 75 cts. each; \$4.25 for six; \$8.00 for 12. Tested, \$1.00 each in any quantity. Satisfaction in all cases or money refunded. Been breeding queens for sale for 25 years, and we know how.

L. H. Robey, Worthington, W. Va.

Golden and Three-band Italian Queens . . . 45c

We guarantee them to be as good as money can buy. Our breeders are of the very best, our methods are the best known. If they are not satisfactory you can get your money back for the asking. Where can you get any more for big money? Virgins, 25 cts.; untested, one, 45 cts.; 12, \$5.00; 100, \$40.00; tested queens, 75 cts. Special offer to members of association thru their secretary. Get your secretary to write us. Queens we are offering you are choice. The Italian strain of bees have proven themselves able to resist foul brood to a greater degree than any other strain, and they are, therefore, the strain to buy if you have foul brood in your locality.

We also have breeders direct from Dr. Miller and can furnish queens of his strain, which is the best in the world. Start right, get some of the best in the world for the foundation of your strain.

To inquiries:—I am rearing no queens for sale, but am keeping The Stover Apiaries supplied with breeders from my best stock; and from thence you can obtain the same queens you could get directly from me.

C. C. Miller.

Marengo, Ill., March 1, 1916.

Prices of Dr. Miller's strain: Virgins, 50 cts. each; 12 for \$5.00; Untested 60 cts.; 12 for \$6.00. Tested, \$2.00; Select Tested, \$3.50; Breeders, \$5.00 to \$10.00. Will replace inferior queens.

Capacity over 2000 per month. Safe arrival and satisfaction guaranteed.

The Stover Apiaries
Mayhew, Miss.

Italian Queens---Northern Bred

make extra hardy queens for Canada and Northern States. I reduce price on untested August and September, 75 cts. each; \$8.00 per dozen. Select tested, \$1.50.

Write for prices on larger numbers and get my price list in full. Plans "How to Introduce Queens," and "Increase," 25 cts.

E. E. MOTT, . . . Glenwood, Michigan

Gleanings in Bee Culture

E. R. ROOT

Editor

A. I. ROOT

Editor Home Dept.

H. H. ROOT

Managing Editor

J. T. CALVERT

Business Mgr.

Department Editors:—Dr. C. C. Miller, J. E. Crane, Louis H. Scholl, G. M. Doolittle, Wesley Foster, J. L. Byer, P. C. Chadwick, E. G. Baldwin, Grace Allen.

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AGENTS. Representatives are wanted in every city and town in the country. A liberal commission will be paid to such as engage with us. References required.

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HONEY MARKETS

The prices listed below are intended to represent, as nearly as possible, the average market prices at which honey and beeswax are selling at the time of the report in the city mentioned. Unless otherwise stated, this is the price at which sales are being made by commission merchants or by producers direct to the retail merchants. When sales are made by commission merchants the usual commission (from five to ten per cent), cartage, and freight will be deducted; and in addition there is often a charge for storage by the commission merchant. When sales are made by the producer direct to the retailer, commission and storage and other charges are eliminated. Sales made to wholesale houses are usually about ten per cent less than those to retail merchants.

CLEVELAND.—Only very little new comb honey in market yet. Demand also continues light. There is still a little old honey in market at \$2.00 to \$3.25 per case as to quality and condition. Comb honey, new, fancy, brings \$3.85 to \$4.00.

C. CHANDLER'S SONS.

Cleveland, Sept. 6.

ALBANY.—On account of the threatened railroad strike and also the fact that few producers have any great amount of honey ready to ship, there is but little stock on our market, and it is just as well with present warm weather and limited demand. A large stock would tend to weaken prices. Comb honey, per case of 20 combs, \$2.50 to \$3.00, according to weight. No. 1 buckwheat of 20 combs, \$2.50 to in cans, 7 to 8; amber in cans, 7.

CHARLES MACCULLOUGH.

Albany, N. Y., Sept. 9.

ST. LOUIS.—Our honey market is quiet. Receipts of extracted honey have been quite large within the last two weeks. Our quotations are unchanged, but no firm price has yet been established on new crop of comb honey. We quote extra fancy, per case, \$3.50 to \$3.75; fancy, \$3.25; No. 1, \$3.00; No. 2, \$2.50 to \$2.75. Extracted white brings 9 cts.; light amber in cans, 8 cts.; amber, in cans, 6½; barrels, 6 cts. Clean average yellow beeswax brings 28½ cts.

R. HARTMAN PRODUCE CO.

St. Louis, Sept. 7.

KANSAS CITY.—There is quite a little honey on our market. The demand in the small towns is somewhat slow, on account of the heavy crop of native honey produced early in the season. The city is well supplied, selling at the following prices: Fancy, \$3.25; No. 1, \$3.25; No. 2, \$2.75 to \$2.90. Strictly fancy white extracted, 8½; light amber, in cans, 7½; amber, in cans, 7c. Clean, average yellow beeswax brings 25c.

C. C. CLEMONS PRODUCE CO.

Kansas City, Sept. 11.

CHICAGO.—The receipts of the yield of 1916 from the adjacent territory are liberal, and the quality is of the best; sales are being made at the prices named, but the supply is in excess of demand, as it is early. Prospects of sales are encouraging. This market sells by weight; extra fancy per pound, 16 cts., in closed cartons; fancy, 15 cts. with or without cartons; No. 1, 13 to 14 cts., with or without cartons; No. 2, 8 to 12 cts., with or without cartons. Extracted white, per lb., 7 to 9 cts.; light amber, in cans, 7 to 8 cts.; amber, in cans, 5 to 7 cts. Clean, average yellow beeswax brings 30 to 32 cts.

R. A. BURNETT & CO.

Chicago, Sept. 2.

MATANZAS.—The price of honey in this market, at the present time, is 45 cts. per gallon, including barrel. Beeswax per lb. 29 cts.

ADOLFO MARZOL

Matanzas, Cuba, Sept. 6.

Deposit your Savings
with

The SAVINGS
DEPOSIT BANK CO.

of MEDINA, O.

The Bank that pays 4%

Write for Information

A.T. SPITZER
PRESIDENT

E.R. ROOT
VICE-PRESIDENT

E.B. SPITZER
CASHIER

ASSETS OVER ONE MILLION DOLLARS



Fine Yellow Italian Tested Queens

only \$1 each, or I will send 3 for \$2. Carload Italian bees at \$3.90 a stand, 8 and 10 Hoffman frames, if sold this fall; 200 stands. Will take \$4.50 next spring.

J. L. FAJEN, Stover, Mo.

Special Notice by A. I. Root.

FRAUDULENT ADVERTISING.

It rejoices my heart to find the following, which I clip from *Farm Life*:

ADVERTISE HONESTLY SAYS THE ASSOCIATION OF NATIONAL ADVERTISERS.

The following Declaration of Principles was unanimously adopted by this Association at Dayton, Ohio, May 5, 1916:

Resolved, That we, members of the Association of National Advertisers, are opposed to advertising of the following kinds:

All advertising that is fraudulent or questionable, whether financial, medical, or any other; all advertising that is indecent, vulgar, or suggestive, either in theme or treatment; that is "blind" or ambiguous in wording, and calculated to mislead; that makes false, unwarranted, or exaggerated claims; that makes uncalled-for reflections on competitors or competitive goods; that makes misleading free offers; all advertising to laymen of products containing habit-forming or dangerous drugs; all advertising that makes remedial, relief, or curative claims, either directly or by inference, that are not justified by the facts or common experience; and any other advertising that may cause money loss to the reader or injury in health or morals or loss of confidence in reputable advertising and honorable business.

Resolved, That we recognize our own obligation as advertisers to conform to these principles.

Resolved, That we urge upon all publishers and upon all sellers of advertising space or service, a strict adherence to these principles, and that, in so far as the exigencies of our individual business will permit, we direct our advertising to those mediums which make the observance of these principles their rule and practice.

The Association of National Advertisers represents the leading advertisers of America. They stand as one man behind these resolutions. They are determined to do everything in their power to make it impossible for the advertising fraud to live.

Convention Notice

The annual meeting of the Northern Illinois and Southern Wisconsin beekeepers' association will be held in the supervisor's room in the courthouse in Rockford, Ill., on Tuesday, Oct. 17, 1916. All interested in bees are cordially invited to attend.

R. KENNEDY, Sec.

Rockford, Ill., Sept. 1.

Preparedness!

Your success this season, Mr. Beekeeper, depends on being ready. You need to buy your supplies now.

Root's Goods mean Real Preparedness.

We sell them in Michigan. Send for catalog. Beeswax wanted----

M. H. Hunt & Son, 510 Cedar St. N., Lansing, Mich.

"If Goods are Wanted Quick Send to Indianapolis"

Indications just now are very favorable for a good season; but we are, of course, at the mercy of the weather conditions. A good season means an excessive demand for the line which we handle, and we mention this, urging our friends to place their orders before the goods are really needed, that none may be disappointed.

We carry Root's goods and sell at their prices; and considering this as a shipping-point, we can save you time and freight by having your orders come to this house.

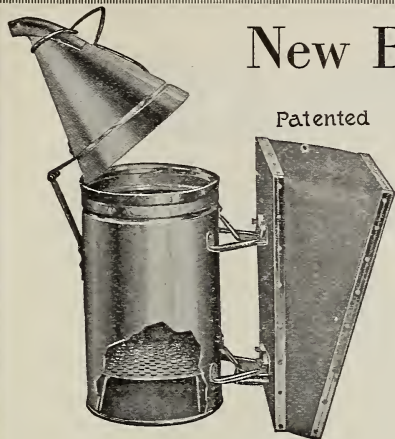
If you are new to the business we should like to explain that Root's goods are the very best that can be produced. If you have been using THE ROOT LINE you will recognize the truthfulness of the above and will want more of the same goods.

Promptness in filling orders is the motto here. We also give small orders the same careful attention that are given to large orders.

Let us have the pleasure of mailing you our free catalog.

Walter S. Pouder, Indianapolis, Ind.

873 Massachusetts Avenue



New Bingham Bee Smoker

has been on the market nearly forty years, and is the standard in this and many foreign countries. It is the all-important tool of the most extensive honey-producers of the world. For sale direct or by all dealers in beekeepers' supplies.

Smoke Engine, 4-inch stove..... \$1.25
 Doctor, 3½-inch stove85
 Two above sizes incopper, 50 cts. extra.
 Conqueror, 3-inch stove75
 Little Wonder, 2½-inch stove50
 Hinged cover on two larger sizes. Postage extra.

TIN HONEY-CANS---LOW PRICES

Five-pound friction-top pails, lots of 50 at \$2.75; 100 lots, \$5.20; crates of 203 at \$10.00.
 Ten-pound Friction-top pails, lots of 50 at \$4.00; 100 lots, -\$7.50; crates of 113 at \$8.30; 565 at \$40.00, F. O. B. Chicago.

Sixty-pound cans, two in a case, 70c per case. Quantity lots, 67c per case; crates of 50 at \$12.00, F. O. B. Chicago or Ohio factory. Prompt shipments are being made at this time.

A. G. WOODMAN COMPANY, Grand Rapids, Michigan

LOS ANGELES HONEY CO.

633 Central Bldg. . . . Los Angeles, Cal.

**Buyers and Sellers
 of Honey and Wax**

Write Us for Prices when in the Market

When Ordering Supplies

remember we carry a full stock and sell at the lowest catalog price. Two lines of railroad—Maine Central and Grand Trunk. Prompt service and no trucking bills.

THE A. I. ROOT CO., Mechanic Falls, Maine
J. B. MASON, Manager

PENNSYLVANIA BEEKEEPERS

Our 1916 catalogs now out. Postal will bring you one. Root's goods at Root's prices. Prompt shipment.

E. M. Dunkel, Osceola Mills, Pa.



Established 1885

A great honey crop is in sight for 1916. If you are needing hives, sections, foundation, and other bee supplies, send at once for our large catalog, full of information. We carry a good assortment of supplies for prompt shipment. Beeswax wanted for supplies or cash.

John Nebel & Son Supply Co., High Hill, Mo
 Montgomery County

HONEY-JARS

No. 25 one-pound screw-cap honey-jars, one gross to a crate, \$4.75; two-dozen cases, \$5.25 gross. We have several styles of jars, cartons, and shipping-cases. Italian bees and queens. Catalog free.

I. J. STRINGHAM, 105 PARK PLACE, N. Y.
 Apiaries: Glen Cove, L. I.

BEESWAX WANTED

for manufacture into
"SUPERIOR FOUNDATION"
 on shares (Weed process)

Our terms assure cheaper foundation
SUPERIOR HONEY CO., Ogden, Utah
 Wanted: Extracted honey

3 Garden Tools in 1 The BARKER

Weeder, Mulcher and Cultivator

The only garden tool that successfully, in one operation, kills weeds, and forms a complete soil mulch to hold moisture. "Best Weed Killer Ever Used." A boy with a Barker beats ten men with hoes. Has shovels for deeper cultivation. Self-adjusting. Costs little. Write for illustrated folder and special Factory-to-User offer.
Barker Mfg. Co.
 Box 117 David City, Nebr.

For New England

Beekeepers, we have everything you need in the way of supplies. Remember we are in the shipping center of New England. Let me send you a new catalog.

H. H. Jepson, 182 Friend St., Boston, Mass.

PATENTS

Practice in Patent Office and Courts
 Patent Counsel of The A. I. Root Co.

Chas. J. Williamson, McLachlan Building
 WASHINGTON, D. C.

BEE SUPPLIES Send your name for new 1916 catalog.
 Dept. T, CLEMONS BEE SUPPLY CO.,
 128 Grand Avenue, Kansas City, Mo.

Gleanings in Bee Culture

DEVOTED TO HONEY, BEES, AND HOME INTERESTS

Established 1873

Issued semi-monthly

ADVERTISING RATES

Based on 20,000 circulation guaranteed.

Display, per agate line, flat, 15 cts.

Quarter page, \$8.00.

Half page, \$15.00.

Full page, \$30.00.

Outside back cover page, 25 per cent additional.

Special and guaranteed positions, 25 per cent to 50 per cent additional.

Classified, per counted line, flat 25 cts.

(Discounts on classified advertising: 10 per cent on 6 continuous insertions; 15 per cent on 12 continuous insertions; 25 per cent on 24 continuous insertions.)

Cash discount if paid in 10 days, 2 per cent.

Bills payable monthly.

Copy subject to editorial approval.

SIZE AND MAKE-UP

Column width, 14½ ems (2⅜ inches).

Column length, 8 inches.

Two columns to page.

Number of pages each issue, 64.

Forms close 10th and 25th of each month.

THE A. I. ROOT COMPANY, Publishers
MEDINA, OHIO

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Wanted---Honey

Both Comb and Extracted

If comb honey, state grade and how it is put up, and your lowest price delivered Cincinnati.

Extracted honey, mail a fair-sized sample, state how it is put up, and your lowest price delivered Cincinnati.

If prices are right we can use unlimited quantities.

C. H. W. Weber & Company, Cincinnati, O.

2146 Central Avenue

We Were KEPT BUSY Last

Month---- No Mistake about That

All during the month were only at the most three days behind in filling orders. Are now caught up and ready for orders for shipping-cases. If you will be in need of these better get your order in early.

F. A. SALISBURY, Syracuse, New York

1631 West Genesee St.

Nominated by Acclamation Lewis Sections

The kind that does not break in folding

Beekeepers everywhere, no matter what their preference may be for hives or special apparatus, agree that when it comes to sections that

There are no sections like Lewis Sections!

WHY IS THIS TRUE? BECAUSE LEWIS SECTIONS are made of Wisconsin basswood—the best material for sections—out of carefully selected white stock. The V groove which allows the sections to fold is scientifically made. LEWIS SECTIONS are polished on both sides and are neatly and accurately packed in a tight wooden box, insuring delivery in good order.

At the same price you pay for other standard makes of sections you get all of the above. The making of Lewis Sections has been under the supervision of a Lewis section expert who "has been at it" for over thirty years. No wonder Lewis Sections are perfect. One of our customers tells us that he has put up (folded) thirty thousand Lewis Sections in a season, and has not found one section in the whole lot that was not perfect. Can we mention any more convincing evidence of quality? Can you say the same of even five hundred of any other make?

INSIST ON LEWIS SECTIONS. LOOK FOR THE BEEWARE BRAND.

G. B. Lewis Company, Watertown, Wisconsin

Catalog on request giving nearest distributor.

DO YOU WANT Your Bee Supplies Shipped Promptly?

We carry from four to six carloads of the finest BEEWARE on hand at all times, and can fill your orders without delay. . . . BEE-HIVES, SECTIONS, Shipping-cases, Tin Cans, and all other Bee Supplies; also

Dadant's Foundation

by return freight, mail, or express

DADANT & SONS, Hamilton, Ill. Dear Sirs:—The box of foundation arrived a few days ago in fine condition. I have kept bees for over thirty years, and have purchased foundation from many firms, and must say that your foundation is the nicest that I have ever used, and I wish to thank you for the prompt shipment and large amount of wax you secured for me.

A. W. DARBY, Alburg, Vt., May 3, 1916.

We have forty years' experience and thousands of satisfied customers. Are you one of them?

Dadant & Sons, Hamilton, Illinois

GLEANINGS IN BEE CULTURE

Published by The A. I. Root Co., Medina, Ohio.

E. R. Root, Editor

A. I. Root, Editor Home Department

H. H. Root, Managing Editor

J. T. CALVERT, Business Manager

Entered at the Postoffice, Medina, Ohio, as second-class matter.

VOL. XLIV.

SEPTEMBER 15, 1916

NO. 18

EDITORIAL

Honey versus Sugar Syrup for Winter Food

WHILE good ripened honey is probably superior for a winter food, is not our good friend Dr. Miller attaching too much importance to iron which is found in very minute quantities? If honey is superior to syrup it is probably due to inversion and to the protein contents—namely, pollen.

The Rosy Side of Beekeeping

Do not fail to read the article by Mr. Al-lard in this issue, and then remember that there is another side. This year, 1916, in the eastern states, has been one of the good years; but it is fair to say to the beginner that he cannot do as well every year as he did in 1916, but what one has done some years others can do under the same conditions.

Consumption of Winter Stores in Indoor and Outdoor Wintering

In this issue, page 853, Mr. Shiber refers to a current belief that bees consume less honey in a good cellar than bees well housed outdoors. This is something more than a belief—it is a real fact. The question undetermined is whether the larger consumption of stores outdoors does not yield stronger colonies in the spring. If our subscribers have any evidence to offer we shall be pleased to get it.

Old Dobbin Giving Way to Gasoline

J. E. CRANE & SON are now using an automobile truck for their out-apiary work, and have turned their horse out to grass. No horse or team can compete with gasoline for outyard work. We have proved it to our own satisfaction. A team is too slow, and, besides, incurs the liability of stings

and a general spill. Since the recent reduction in the price of the Ford automobile, one can now have a half-ton truck for about \$350. A good team and wagon costs as much with only a fraction of the capacity for miles.

Rabbit Spacers versus Spacers on the Frames

MR. LOUIS H. SCHOLL, in this issue, page 844, has come to the same conclusion that we and all others have who have tried frame-spacing rabbits; namely, that they fall far short of real self-spacing frames like the Hoffman. We do not know of a case in this country where self-spacing rabbits have passed much beyond the experimental stage. Beginners with them are enthusiastic at first, but they soon discard them.

The Ohio Field Meeting at Medina.

ON Friday and Saturday, August 25 and 26, beekeepers of Ohio came trooping into Medina by auto, trolley car, and train until over a hundred and fifty had registered. Dr. Phillips and Mr. Dadant were unable to be present but several of the Ohio inspectors were here, as well as Mr. House and Mr. Clark from New York State, and there was no lack of good live speakers.

In our next issue we shall have some pictures as well as some notes of what was said and done.

Variation in Colonies of Bees; the Washboard Act

MR. DOOLITTLE in his regular department in this issue has an interesting article on this subject. It will pay to read it. Among other variations he speaks of one colony that he had that spent its time in scraping the entrance-board, washboard fashion.

We have seen this same performance dozens of times among our own bees after the main honey-flow was over. We have been asked time and time again what it meant or what the bees were doing, but have never been able to explain it. Does any one know?

Honey-crop Conditions and Prices

THERE is nothing new to report since our last issue, page 774. As soon as the crop begins to pour into the market we shall be able to get more definite information. Apparently many beekeepers are making the mistake of waiting too long. A little later, when every one begins to unload, there is danger that prices will sag. The market is probably as good now as it will be later in the season.

Old comb honey of last year is pretty well cleaned up; but some of it after it granulated sold at a sacrifice.

Our Cover Picture

THERE are many different schemes for locating a hive in an apiary to avoid long straight rows and yet to have a system making it easy to locate any hive in the yard by its position in any certain group. The apiary seen on our cover for this number shows a very unique plan used by R. A. Marrison, of Cataraqui, Ont., Can. Mr. Marrison, as the picture indicates, locates his hives in groups of twenty-seven. There are three rows forming the sides of a triangle, nine colonies in each row, all facing the center.

The yard is surrounded by two rows of trees, including apple, plum, cherry, pear, mulberry, black-walnut, and butternut. The picture was taken from the roof of the dwellinghouse, and shows only a part of the yard. In all, there were 204 colonies at the time the picture was taken.

Packing Hives in Newspapers for Winter

MR. BOND, in this issue, page 854, has had success in wintering bees in newspaper-wrapped hives with a winter case over all. Where one has hives screened by buildings and fence as shown in the picture of his apiary, the plan will give excellent results, but it will hardly be adequate where the hives are out in the open exposed to a strong wind-sweep.

We have come to believe that windbreaks for outside wintering are very important factors. If we had to choose between windbreaks and packing we would accept the

former; but both are very important. Mr. Bond's little apiary is surrounded on one side by a picket fence. Such a fence, more or less surrounded by buildings, affords an excellent windbreak.

Sugar-fed Comb Honey Not a Commercial Possibility

MR. WILLIAM COX, in last issue, page 805, goes on to show how sugar-fed comb honey is not possible, even if the business were legitimate. Years ago many attempts were made to produce the product. But in almost every case sugar feeding to fill out sections was given up. The nectar from the fields costs nothing; but when one has to pay for the sugar, and add its cost to that of the labor, and the cost of materials and equipment, he will find that he cannot compete with the other fellow who uses only the nectar of flowers that costs nothing.

While there is an art in feeding back or in feeding sugar syrup, the amount of loss under most conditions between the amount actually fed and the amount actually stored is considerable.

Proper Temperature to Heat Honey for Bottling

MR. SHIBER, in this issue, page 853, brings up this question. A temperature of 160 degrees F. will keep honey liquid—that is, from granulation, for a longer period than honey heated to 130 and then sealed. But the latter honey will have a little better flavor to the connoisseur and to the beekeeper who knows the quality of honey just as it comes from the combs. But the average consumer—yes, the great mass of them—will detect no difference between the honey heated to 160 and the other to 130. But if a bottle of honey shows granulation, even the slightest trace of it (and it will show up at 130), that same average consumer becomes suspicious and does not buy.

If the bottler could be sure his goods will be sold in six or even nine months, in a warm room the 130 temperature would be better than 160; but the average jobber and dealer puts his honey in cold storage. Such honey will granulate in less than a year. For this reason the bottler raises his honey to 160 before bottling.

Honey in the Trenches of Europe

WE have now information from a source which we are not now at liberty to reveal, that honey is being used in the European trenches along with sugar. Both of these

articles are energy-producers, and in many cases honey is cheaper than sugar. We have ascertained that the United States during the last fiscal year imported twice as much honey as it has done during any previous year.

When the war broke out in 1914 the prices on medium grades of honey began to sag until there was no demand. In the meantime sugar began to climb. The war lords of Europe, when it came to the matter of rations, soon discovered that honey, an energy-producer, was much cheaper than sugar (also an energy-producer), and consequently honey has been going into the trenches, and is going there still. Apparently only the medium grades are being used, because they furnish as much energy per pound as the finer and better-flavored table honeys that cost as much or more than sugar.

Swarming Dependent on the Strength of the Honey-flow

MR. J. A. HEBERLE, in this issue, page 869, says: "It is generally known that good honey years are poor swarm years," and *vice versa*. "The same colony which showed no swarming impulse in 1911 may in 1912 swarm excessively." The relation of swarming to the honey-flow may not be as generally recognized in this country as it is in Germany; but we believe that our correspondent is right when he says that good honey years are poor swarm years; or, rather, we would modify it this way: When the honey-flow is light and continuous, swarming is apt to be furious. When the flow is heavy—so heavy, indeed, that the queen is "honey-bound," swarming almost entirely ceases. This matter has been proven again and again, principally in the southern states. In Texas, as a general thing, swarming begins during the early part of the season when the flow is light and intermittent. As soon as the flow becomes heavy, swarming almost entirely ceases.

Years ago, in talking with the late W. Z. Hutchinson on this point we compared notes; and we finally concluded that the same characteristics that show up so strongly in Texas also show up in the northern states *when conditions are the same*. Swarming, therefore, is not a matter of locality but of conditions.

Making Honey Sales for Cash Directly at the Beeyard

MR. POWERS, in this issue, page 849, has struck upon a novel scheme of putting a

honey-sign directly over an automobile highway where hundreds of cars are passing daily. The scheme is as unique as it is effective. Automobile drivers have frequently noticed melons, peaches, and apples in baskets on sale along the side of the road. We know of a number of cases where fruit-growers have sold their entire crops to passing cars. All that is necessary is to display the fruit.

Our basswood yard is located on an automobile highway from Columbus to Cleveland. One of our young men, Mr. Arlie Pritchard, whose apiary is in sight of the road, has a honey-sign on display and honey ready to hand out. He has sold hundreds of pounds of honey to automobilists, who are willing to pay a good fair price, because they say this is real honey, and because they can see the bees and the hives.

In this year of a large honey crop beekeepers should utilize this means of selling honey right at home; and do not forget the value of the advertising effect. One driver will tell another; and the result will be that a regular trade will be established. The good housewife and the children can do all the work, and, besides, will have ready cash in the house, and plenty of it.

C. H. Bockock, the Isle of Wight Expert and His Tentative Conclusions

IN our issue for July 15, page 583, and again in Aug. 15, page 711, we referred to Mr. C. H. Bockock, of Newmarket, England, a representative from the Board of Agriculture of Great Britain, who was here to study bee paralysis and other diseases of adult bees in the United States. In this issue, page 851, we are glad to introduce him more formally to our readers. He is evidently a thoroughgoing beekeeper as well as one who is familiar with the Isle of Wight disease as found in Great Britain. If we understand it, he came to this country at his own expense in order that he might determine whether there is a direct relation between the adult bee diseases in Great Britain and the same disease or diseases that have been showing themselves in various parts of the United States for the last three or four years. In the engraving Mr. Bockock is seen leaning over one of the hives; and if one could see him and shake hands with him, he would find him to be a quiet unassuming gentleman, a good beekeeper, a scientist, and one familiar with the diseases of bees. He left a pleasant impression on our American beekeepers, and goes back to his own country with our best wishes.

He was fairly sure of one thing; and that is, that the Isle of Wight disease is probably not the same as the bee paralysis of the United States. He also found here specimens of infected bees that may or may not be affected with the disease from the mother country.

Mr. Bocoek, careful investigator that he is, did not assume to draw any positive conclusions, but very modestly gave his tentative opinions about as follows:

1. The Isle of Wight disease and bee paralysis are probably not one and the same thing.

2. The disappearing disease found in this country may be the Isle of Wight disease.

3. It is doubtful whether the Isle of Wight disease would make any serious headway in the United States with our climatic conditions and American Italians.

4. He found *Apis nosema* in some bees in this country that appeared to be normal and also in some that were not normal.

5. *Apis nosema* may be the cause of Isle of Wight disease, but probably it works with some other organism before any serious symptoms show up.

6. A vigorous strain of Italians in Great Britain seems to be more immune than the native black bees.

7. American Italians may be partially immune to the English disease.

Introducing Queens Daubed with Honey

WHILE our correspondent Prof. Baldwin, in his department in this issue, page 845, does not claim originality for the method of introducing queens daubed in honey, we are of the opinion that he has brought out a modification that is original and important. His plan differs from the old one in that he uses a whole cupful of honey instead of just a mere daub. The queen is dipped in a cup of honey, when both are poured over the frames. The general spill and apparent ruin of the combs so diverts the attention of the bees that the queen is forgotten. After they have licked up the combs and the queen which, in the process, is made to acquire the odor of the colony, the new mother is accepted as a matter of course. In fact, she is only an incident. Merely daubing the queen with honey focuses the attention of the bees on the queen. Baldwin diverts them away from her. See the difference?

A year ago last spring we fed up a whole apiary by smearing Porto Rican honey over the combs of about fifty colonies. There

was probably a cupful or even two cupfuls poured on the frames. The result was magical. Every bee was engaged in the operation of putting things to rights. We found we could go back to those colonies and lift the cover without smoke, and give them another dose, because they were busy in cleaning up. Busy people do not ordinarily get into mischief. It is the idle, waiting for something to turn up, that make trouble, and so with bees.

If Prof. Baldwin has introduced an improvement it would be perfectly legitimate to call the method Baldwin's. While A. C. Miller did not introduce the method of introducing queens with smoke he did introduce a very valuable improvement, and hence the plan is called today the Miller smoke method.

Sweetened Spraying Solution

THERE has been conflicting testimony regarding the effects of spraying on bees. Where a spraying solution is sweetened with molasses, either to make it stay on the foliage better or to make it more inviting to the insects that it is supposed to kill, it seems to us that the danger to the bees would be very much greater. On the first page of *The Pennsylvania Farmer* for May 20 a recipe for rose-chafers is given as follows: 10 pounds of arsenate-of-lead paste, 8 quarts of molasses, and 50 gallons of water. The explanation is given that the insect is fond of sweets, and in eating the molasses gets the arsenate of lead.

If this solution were used in a wholesale manner we see no reason why bees in large numbers should not be poisoned. Since this insect does considerable damage on roses, grapes, and cherries, we suppose there is a possibility that such a solution or a similar one might be used a good deal.

If a sweetened solution is the only one that such insects will eat it would hardly do for the beekeeper to decry such practice, perhaps, and yet in a way this is a serious situation; for this liquid, whether it were sprayed on the blossoms or on the leaves, would be attractive to the bees at certain times of the year when they could get no nectar from the flowers. Two or three rains would wash it off, but considerable damage might be done meanwhile. In the clipping above referred to the statement is made that these insects are the most common on light sandy soil, but they are scattered pretty well, nevertheless. What is the beekeeper to do in a locality where a sweetened spraying solution is used on a large scale?

Dr. C. C. Miller

STRAY STRAWS

Marengo, Ill.



P. C. CHADWICK, please quit talking about a laying worker heading a colony, p. 653. Dozens of 'em, if there's one.

REMEMBER, Mr. Editor, how the bees were working like crazy when you and Dr. Phillips were here last year? At it again, exactly the same way, now.

H. H. KOLLOSTER, you say, p. 737, "I can use factory-made hives if I can afford to buy foundation." I can't afford *not* to buy foundation. I wonder really if you can.

R. F. HOLTERMANN doesn't want to "leave me a leg to stand on." He says, p. 682, if he were at the clipping business with me he'd never stop at clipping off one leg, but would take off both. What a vindictive cuss he is! Well, anyway, I'm glad to get off without having my head taken off too.

CHARLES E. DUSTMAN says, p. 723, that sealed worker combs are one inch thick, and drone $1\frac{1}{4}$. When I read that, I said to myself, "With the usual spacing, $1\frac{3}{8}$ inches, two combs of drone brood would have only $\frac{1}{8}$ inch between them, allowing no bee to pass." Then I went to the apiary and cut out sealed brood of both kinds. Sure enough, the Dustman measurements were all right. To be sure, it was old comb, and new would measure less. But bees often have old comb. Now, how do they manage with that $\frac{1}{8}$ -inch space?

J. L. BYER, you say, p. 651, you don't see how you could object to a man, owning property near you, keeping bees, but you do object to a specialist with a large apiary, and you seem to wish there might be a law against the last fellow. Now, if it's all right for your neighbor to have half a dozen colonies on his own property, why isn't it right for him to increase gradually to 100 and become a specialist? I have neighbors with half a dozen to 25 or more colonies, and there's no hard feelings between us, but I'd prefer to have it so that no one could have bees in a certain territory, of course paying for my privilege, just as, by paying for it, I can say that no neighbor can keep his cattle on a certain piece of ground, not even if that neighbor has only one cow.

A. I. ROOT says, p. 750: "Years ago I decided that a pound of honey in the comb, well ripened and sealed up, was worth a good deal more than a pound of sugar in preparing bees for winter—perhaps twice

as much. I should like to know what Dr. Miller thinks about the comparative cost of this manner of feeding."

With a fine article of extracted honey at 6 cents a pound (see p. 711), and sugar at present prices, one would hardly make a lot of money to feed sugar in place of honey. But when sugar is 5 cents a pound, and honey 10, and one feeds 20 pounds for winter, isn't there a clear gain of a dollar a colony by feeding sugar? But wait. When winter is over, those bees that have fed on honey, with its iron and other matters that are entirely lacking in sugar, will have a vigor at building up and storing, as compared with the sugar-fed bees, that may easily recoup several times over the extra dollar for the winter food. Yes, friend Root, you are quite conservative when you value such honey as you describe at double the worth of sugar for winter.

JOHN H. LOVELL asks some questions, p. 710, "Did Dr. Miller examine the pollen in the anthers of fresh flowers?" Never. "Has Dr. Miller examined the pollen in his hives under a microscope?" Never. But as to the color of white-clover pollen, I appeal from Lovell the botanist to Lovell the beekeeper. The former is a man for whom I have great respect, and whose statements I would not lightly question; the latter is a friend of mine with whom I feel on a level; and when I read that white-clover pollen was something else than brown, it never occurred to me that it was the botanist talking, but the beekeeper talking about what he saw in the comb or on the bees' legs. Honest Injun, I never thought of the powdery stuff on the flowers at all. In botanists' language, I'm ready to accept that the pollen of white clover is yellow, but in beekeepers' language it's brown; for in beekeepers' language, pollen is the stuff in the cells or on bees' legs. "Brown balls, evidently composed of white-clover pollen," says beekeeper Lovell, p. 728. One more question: "Is he certain that white-clover pollen is as abundant as he supposes?" Reasonably certain. When bees are bringing in honey from white clover by the ton, working almost exclusively on it, and that for weeks, and during that time bringing loads of brown pollen on their legs, it's reasonable to suppose that the mass of brown pollen accumulated in the combs is from white clover. Yes, friend Lovell, you're right, I've considered the matter chiefly from the hive end. That's because I'm a beekeeper, and not a botanist.

J. E. Crane

SIFTINGS

Middlebury, Vt.



From that interesting article on page 494, June 15, it looks as though we shall have to revise our methods of bottling honey by using a lower temperature for a longer period. More and more, honey is coming to the front as a most valuable food.

"The beginner should understand there is a large amount of risk in trying to introduce a laying queen to a colony that has been queenless for a week or ten days," says the editor, page 518, July 1. Yet this is the method advised by queen-breeders fifty years ago.

The greenish yellow pollen from clover that Prof. Lovell speaks of, page 477, June 15, here appears to be a greenish brown; and, while not abundant in each flower, it proves to be very abundant in the aggregate, as I believe bees gather more of it than any other kind.

August 14 the Vermont beekeepers met in this town for a summer meeting. I believe it was the largest gathering we have ever had, owing in part to a large crop of honey in this immediate vicinity and the presence of C. P. Dadant, editor of the *American Bee Journal*.

It is decidedly interesting at this season to watch the growing fruit, and cut open imperfect ones and discover that the cause of the imperfect development of the fruit which, in almost every case, is the lack of the proper fertilization of the flowers, and, as a consequence, the lack of growth of seed and fruit.

The crop in our county will be abundant this year; but last week I was inspecting bees in the next county south and was surprised to learn that the crop there would be very light—not half that of last year. This week I met two beekeepers from the north part of the state, from two different counties, who say they have secured very little honey this year.

There is a fitness in using so much of the space of the Aug. 1st number to the marketing of honey. As Mr. C. P. Dadant remarked a day or two ago, the future of profitable beekeeping will depend on our ability to increase its consumption. I am glad to know the A. I. Root Co. are enter-

ing on a vigorous campaign of honey advertising—page 646, Aug. 1.

It seems that Massachusetts has recently passed a law prohibiting misstatements in advertising. It prohibits untruthful statements of values in excess of advertised prices; false declarations that the advertiser employs; misleading statements designed to induce the public to go into the establishment of the advertiser, and other intentionally deceptive advertising, etc. Let the good work go on.

Three or four weeks ago we began to wonder how we were to get our honey home from the outyards. We could not hire a truckman; farmers were busy with their haying; livery teams were expensive, and our own horse was getting tired out. We bought an International motor truck that has given us no end of pleasure. It solves the problem of transportation to outyards, and our horse has been turned out to pasture.

When I see an article by Allen Latham in *GLEANINGS* I always "sit up and take notice," and his discussion of European foul brood on page 479, June 15, is no exception. While I am not prepared to accept fully his theory as to the spread of the disease (he may be right) I am quite sure the disease spreads from nurse bees entering a neighboring hive. There may be more than one way in which it spreads. With me I have found a hive standing near another having the disease much more subject to it than those further away.

Mr. Latham assumes that the reason Italian bees are more immune to European foul brood is because they remove the diseased larvæ bodily. If this theory holds true, then we may believe that in removing the dead larvæ by first sucking the soft parts the blacks get germs into their stomachs, and so transmit the disease to other larvæ. Now, I have found Italian bees much more resistant to American foul brood than black bees. When I go thru a yard of bees for the first time where American foul brood has recently broken out, and find every colony of black bees in bad shape from the disease, and the Italian bees but slightly affected, and perhaps some of them showing no indication of disease, I have great respect for their ability to resist this form of disease, as well as European foul brood. Let us be thankful for the lemonade treatment.

BEEKEEPING IN CALIFORNIA

P. C. Chadwick, Redlands, Cal.



Allen Latham's queen-rearing plan as given on page 592, July 15, is good, for I use it and know that it is excellent. If the cells are placed in the colony and allowed to be polished for a few hours before giving them the larvæ a goodly number may be accepted without the use of royal jelly if the grafting of the larvæ is done rapidly and the combs returned to the hive at the earliest possible moment.

On page 645, Aug. 1, the editor says: "Even as it was, we instructed the boys to burn all such combs." Now I scold and scold about burning things valuable about the apiary that can be otherwise cleansed, with the feeling that I surely will impress the idea, and then you come along and recommend the burning of combs! The word "burn" should have no part in the cleansing of bee supplies, and to my mind should be discouraged entirely.

SOME OF THE DIFFICULTIES IN CO-OPERATIVE SELLING.

The subject of co-operation in selling honey, in the Aug. 1st issue, was well handled; but there were too few details in many instances to give the desired information to the casual reader.

State Market Commissioner Harris Weinstock has under consideration the problem of organizing the beekeepers in California in the form of a state-wide marketing organization. Mr. Weinstock sent out 2200 letters of inquiry to beekeepers of the state some time ago, and the enthusiasm with which they were received may be best told by saying that only six per cent of them were answered, or about 120. This fact alone was sufficient to discourage any but the strongest in intent and purpose; so, inasmuch as it did not discourage Mr. Weinstock we must place him at the head of the column. He has recently issued another letter, I suppose to those who were interested enough to answer (this is my presumption, as I doubt if he would continue writing to those who showed no interest), asking for their judgment as to the advisability of calling a conference to discuss the subject of a state-wide marketing organization.

In my first answer to the commissioner I did not speak very encouragingly of the possibilities of organizing the beekeepers

into a successful organization for marketing purposes. My chief reason for so writing was the experience in that line that has now passed into history of organizations. But the efforts of Mr. Weinstock are so commendable that I feel he should be given all the support possible, for it may be that just ahead he may be able to show us a successful organizing plan.

That there is need of an organization is evident, and yet there are many reasons why it will be difficult. The article by J. Edgar Ross, page 655, Aug. 1, goes right into the heart of some of these reasons. He goes into history and points out the very thing that causes the downfall of the majority of beekeeping organizations. Then there are other reasons that make for failure. One of those is, say what we may, the buyers as a rule are following very closely the trend of the market, and are offering prices that many times allow them only a fair profit for dealing in this commodity; yet at times we know that, when the market is on the downward trend, the buyer gets crafty and the producer gets panicky, and the tendency is in favor of the buyer. At these periods an organization would be of far more value than at any other time, if the object of holding the producer from "dumping" could be worked out. But, as Mr. Ross says, "Co-operation requires the yielding of individual co-operators, and without the press of necessity it can never be a success." There is the situation in a nutshell. Last season when we were begging buyers to take our white honey at five to five and a half cents, it would have been much easier to form an organization than at the present time when honey has moved at a good figure and readily. Last season the buyers were accused of having a gentleman's agreement which may or may not have been true, while this year almost every one secured more for his honey than he thought possible early in the season, and the beemen do not care whether the buyers are working together or not. This goes to show that the producer has no real concern about organization when he is prosperous; but when he is not prosperous he is down in the "dumps" and is all concern. But for all the argument pro and con we are indebted to our State Market Commissioner for the interest he is taking in trying to persuade us to co-operate for our own good, and he should receive our most hearty support.

BEEKEEPING IN THE SOUTHWEST

Louis H. Scholl, New Braunfels, Texas



Co-operation and organization should be the slogan of the beekeeper. Never before in my own beekeeping experience have I seen a greater need for it than now.

Texas has had an excellent honey crop for 1916. There were some important beekeeping sections that did not fare as well as others. The north central and the northern parts of the state did not harvest the cotton honey until the fore part of August.

Texas honey prices have been anything but satisfactory this season. With an increased cost of production and low prices commercial beekeeping cannot last long; and not only the beekeeper, but all who are dependent upon him, must eventually suffer. Any effort in the direction of obtaining better prices for our product should be welcomed by not only the beekeepers themselves but by the supply dealers, foundation-makers, bee-journal publishers, manufacturers, merchants, and all others who appreciate the beekeeper's dealings.

It is a fact that Texas honey has been selling at a considerably lower price this year when compared with the advanced cost of all other products and commodities on the market. It is also passing strange that such a condition should exist when the demand for honey was hardly ever better, and when the honey prices in competitive markets of other states were from 1½ to 2 cts. per pound higher. The lack of organized effort on the part of the beekeeper is to blame. There does not seem to have been an overproduction in the state; and on account of the higher prices in other states there has been no danger of competition. There should have been a better system of marketing.

NIX ON THE RABBIT-SPACERS.

Just recently I had an occasion to assist an extensive beekeeper in apiary work and in the honey-house with hives and supers equipped with metal frame-spacing rabbets. Plain frames are used, and these hang in the notched rabbets; altho I had never had any actual experience with them before, the idea that they are not very practical has always possessed me. Here this proved true, for, being used to the self-spacing Hoffman frames that can be "thrown" into

hive or super and become properly spaced, or that can be handled in pairs or trios, or even fours, it was quite difficult for me to become used to handling each frame individually. Neither could I spread frames apart for the easy removal of a comb or shove them from one side of the hives or supers to the other. There was not that stability of the frames in the filled hives and supers so essential for hauling them, especially when filled with tender comb honey, of which we produce so much. Besides the greater expense in addition to the above apparent drawbacks, this kind of equipment did not appeal to me as well as the simpler and (in my hands) more easily manipulated self-spacing frames.

FRENZIED SELLING.

Honey prices have been driven still lower by competitive dealers as well as by producers who were anxious to sell honey quickly. If the selling could be regulated so that the honey crops might find their way to market gradually, and thus prevent the apparently flooded markets, better prices would obtain. The main trouble is brought about by those who are over-anxious to sell and by those who are after handling a great volume of the honey business so as to enable them to make their per cent of profit irrespective of what the producer will get. A lower price of one to two cents per pound amounts to a difference of something like \$50,000 to the beekeepers of Texas. Is this worth taking care of? It is time efforts were being made for a thoro organization.

CLEAN VS. DISORDERLY YARDS.

The condition an apiary is kept in makes a material difference in the manner the bees in such yard will be cared for. My experience has been that the bees in the yards located in the more attractive places, or even those kept in clean and orderly condition, if not so ideally located, have given us the better returns. In the more neglected apiaries the bees were continually more or less neglected also, while much more careful attention was given them in the case of the former. It affords one not only greater pleasure to work in an apiary in a more favorable location, with everything in the apiary in "apple-pie order;" but the work is done with greater enthusiasm and interest in what needs to be done for the better welfare of the bees and best results for their owner. It affects the owner as well as the employees in the same manner.

E. G. Baldwin

FLORIDA SUNSHINE

Deland, Fla.



FLORIDA A LAND OF SURPRISES.

No two years are alike in Florida, except that they have 365 days. I refer to honey-flows. Mention has already been made in these columns to the very late orange-flow. Even into mid-June honey was stored in supers from the orange-blossoms. Orange usually ends in early April. Our man at Glenwood yard has just extracted (Aug. 6) a fair crop of late orange and palmetto honey, "blended by the bees." It is fairly light in color, good flavor and body, tho not as clear as pure orange.

By the way, it always seems to me about *any* blend of two clear honeys is never quite as light-colored as either one in its purity, and I should be glad to know of others' experiences in this line.

Now comes our second surprise. Cabbage palmetto is usually done blooming by July 20. This year it yielded even up to August 10 or 15, slowly but steadily, honey of an excellent quality. Such a late yield from this source is quite phenomenal. Never before have I known of so late a flow from this, the tree-palmetto. The blossoms are on huge racemes six feet in length, at times of a delicate cream tint, as fragrant as they are beautiful.

The cabbage palmetto referred to seldom yields oftener than once in three years, tho it blooms regularly and profusely. Excess of heat or rain is alike fatal to nectar secretion.

The late yield from this source is very gratifying to beemen within range of the trees, for the honey-outlook at the opening of the year was very unpromising. At the beginning of the season Dame Nature said, "Nothing for you this time," and then flung wide her hands and showered out an unexpected gift.

SWARMING IN AUGUST.

In our home yard there are signs of swarming in August. It is the late and lingering flow from cabbage palmetto that is producing the condition. Swarming in August is almost a thing unknown in Florida, generally speaking. This year there was practically no swarming from the orange-honey flow. These two facts may give a clue to the causes and effects in the matter of swarming. Here is the summary. Bees do most of their swarming on the first main flow; after that swarms are but desultory and scattering, even if late flows do appear. The swarming instinct (whatever that may be) seems satisfied. This year no swarming from orange at the usual season (March);

then late orange and a lingering flow from palmetto with resulting tendency to swarming. But the later flows never seem to produce so wild and intense a desire to swarm as does the first early and profuse honey-flow of the year.

ANTIGONON LEPTOPUS.

The common names are pink-vine, Mexican vine, and Spanish vine. It is a vigorous, tho non-hardy, vine, with broad pendant leaves and showy clusters of delicate pink blossoms. It is cultivated, not wild, and grows so easily, and is so widely cultivated, that bees in many localities are helped materially in brood-rearing by it. From early summer to late fall it blossoms, is always covered with flowers, and the flowers are always alive with bees. Probably no surplus is obtained from it, tho one of our correspondents from Nampa reports that his bees do seem to get even a surplus from it. However, this latter fact is not yet proven. Let all beemen note it well, and encourage the planting. Once started, it requires no further attention, and is withal a beautiful and attractive ornament to any arbor, trellis, or veranda.

POUR HONEY IN WITH THE QUEEN.

Dr. Miller has asked me to describe in detail the method of queen-introduction by the daubing or smearing plan. Well, Dr. Miller, as I said in my former note in GLEANINGS, neither is the idea new in the bee-world, nor is this plan original with myself. I can add very little to what I stated before. The plan, in essence, consists in dipping the queen to be introduced into half a teacupful of honey and pouring her, honey and all, down over and between the frames of the colony to which she is being introduced. The merit of the plan—nay, the secret of success, if secret there be—seems to lie in the completeness with which the queen is daubed with the honey, and the amount of the honey poured in with her. That is to say, she must be thoroly covered with honey.

The amount of honey poured in with her and after her seems also to aid—it may even be essential. Then close the hive-top and see that the entrance is narrowed to a point where robbers can be kept out—according to the strength of the colony.

Since my former report I have lost no occasion or opportunity to test out the plan further; but I should like to hear reports from others, and would advise experimenting at first with some queens, not too valuable at first.

CONVERSATIONS WITH DOOLITTLE

At Borodino, New York.



VARIATION IN COLONIES OF BEES.

"Is it a fact that colonies of bees differ in their individual characteristics? I supposed that they were as near alike as two peas."

With domestic animals we find much variation. No two dogs or horses are exactly alike. There is a difference in size, disposition, temperament, etc., and why should there not be with colonies of bees? Any one who has had even a little experience with bees will readily admit that some colonies are more vicious than others. Some colonies will allow you to stand directly in line of their flight for an hour at a time, patiently going around you to get to and from their hive, while with others two minutes will be sufficient for making you stand out of the way.

The hives of some colonies can be opened with no fear from stings. Others resent all such interference. I remember one such colony. It was with the greatest difficulty that the hive could be opened, even in a good honey-flow, and this trait remained permanently until a new queen was given.

Then I had one colony that persisted in not attaching their combs to the sides of the sections, even in a very profuse yield of nectar, while other colonies with fewer bees and during a light yield of nectar, would occupy every available bit of space, even filling the corners so that there would be no passageways there.

Some colonies will gather pollen to an extent sufficient to crowd out the honey and brood, (apparently leaving the more laborious employment of gathering nectar, thus filling their brood-combs and crowding the mother-bee for room.) The work of one colony was very noticeable this year along this line.

Before the advent of comb foundation the difference in comb-building was very marked. Some colonies would build their combs as straight as a board, and all within the frames, while others would build them crooked or across the frames, even where starters were used.

The business thrift of some colonies is very marked. With a small number of bees they make the most of their conditions; and at the end of the season they will have much more to show than will colonies that were more populous in early spring. Some will work extra early in the morning; others late in the evening.

The swarming impulse is very strong in

some colonies—so much so that, unless you let them have their way, or do something to satisfy them, they will sulk and do little or nothing. Other colonies will work with a vim without any swarming, nor is any manipulation from the beekeeper for its prevention needed. Such colonies will roll up a large surplus.

Some colonies will gather much more propolis than others, daubing the inside of their hive with it until it runs down the sides. They will even leave the legitimate pursuit of nectar-gathering to daub the insides of their sections and half-finished combs with a liquid coat of bee-glue.

I had a hive this season in which numerous bees seemed to spend much of their time standing with their heads down over the front of the hive, moving up and down with their mandibles rubbing against the hive as if trying to scrape something offensive off on the upward movement. No other colony in the apiary showed any sign of doing such a thing.

A few years ago I had one colony the bees of which seemed possessed with the idea that it was necessary to tear down all the foundation placed in the sections before they would do any work in them, while at the same time the rest of the apiary would have their sections nearly full of drawn-out comb and ready for the honey-flow. When the flow comes on, then this colony would go to work building comb, only to have its supers fairly commenced when the flow of nectar ceased.

Most persons will admit that different varieties of bees are quite different; but if these same persons are close observers they will find that there is nearly as much difference between colonies of the same variety as there is between different varieties. The observing apiarist understands that all of these various traits of character are represented in the queen of the colony, and that the character of the colony depends upon the queen and the drone with which she is mated. Aside from the characteristics of her offspring, the queen has traits peculiar to herself; as her size, her willingness to remain in sight on the comb and continue her egg-laying when the comb is removed from the hive, and, more important than all others, her ability to lay eggs. Therefore the most successful apiarist will have an eye to having his hives stocked with the *best* queens that have mated with the *best* drones.

GENERAL CORRESPONDENCE

THE ROSY POSSIBILITIES OF BEEKEEPING

Wake up, Mr. Sapp, and Look Around a Bit

BY J. A. ALLARD

The *National Stockman and Farmer* for July 29, 1916, contained an article on bees written by Mr. C. H. Sapp, of Ohio. I was much surprised at some of the statements made in this article, among which was the following: "Spurred on by the stories of great (often fabulous) wealth which has been reported to come to the apiarian, many people have invested in bees and the accompanying necessary supplies and tools. While some of these have obtained a supply of the coveted sweets, it is safe to say that a majority of them would have obtained a larger supply if they had spent their money for honey," etc.

The author of this article claims to have had a life-long experience with bees. If this is the case, he either lives in a very poor location or is a poor beekeeper. Our location in central Pennsylvania is no better than thousands of others. Yet last year I had one colony which gathered more than a hundred pounds of section honey after the 15th of August.

We have people in this section who give their bees scarcely any attention, and yet harvest at least half that much in good years. It is certain that, if the little workers are given any kind of care, they will pay for their keeping and something more.

A few years ago the *Beekeepers' Review* published a series of articles by prominent beekeepers in which they described their best years, or the years in which they made the most from their bees. For the benefit of those who may not have read these articles, I am going to quote a few of the notable successes.

The first of whom I shall tell is the "Grand Old Man of Beedom," Dr. C. C. Miller, of Marengo, Ill. I quote from Dr. Miller's own story, "In the year 1908, from 129 colonies, spring count, I took 19,480 sections, or 151 sections per colony, increasing to 160 colonies."

And all the work connected with harvesting this surprising crop was done by Dr. Miller himself and his sister-in-law, Miss Emma Wilson. If the doctor sold this crop for only 12 cts. per section he received \$2300 for it.

The next I shall mention is Dr. O. M. Blanton, of Greenville, Miss., who, in 1908,

secured 22,000 pounds of honey from 215 colonies, and increased to 290 colonies. Altho the doctor was in his eighties at that time, he did all the work with the help of one negro. Such a record is enough to put some of us younger fellows to shame.

In 1910 Mr. E. F. Atwater, of Meridian, Idaho, had a crop of 71,000 pounds of honey from 900 colonies, spring count; increased to over 1150 colonies, besides selling a carload of bees during that spring. This crop was extracted honey; and if Mr. Atwater received but 6 cts. per pound for it, he received \$4260.

I quote the following from the Feb., 1911, *Review*, from an article written by Mr. Frank Coverdale, of Delmar, Iowa: "I find that my best season was 1903—350 colonies stored 32,000 pounds of comb honey, which sold at 12½ cts., bringing in \$4000."

Mr. Coverdale says that in 1908 and 1910 his crop almost equaled this.

In 1910 Mr. H. C. Ahlers, of West Bend, Wis., made \$4000 from successful migratory beekeeping, getting a crop in the South, and shipping the bees north in time to catch the late summer and fall flow.

In 1908 Mr. R. D. Bradshaw, of Payette, Idaho, produced 43,200 sections of comb honey from one yard of 500 colonies, and sold the crop for \$4679.

Mr. J. E. Crane, of Middlebury, Vt., produced 42,000 pounds (about ¾ comb honey) from 650 colonies. No doubt this crop netted Mr. Crane between \$4000 and \$5000. This was, I believe, in 1906, and I think Mr. Crane has had even larger crops since that time.

In 1909 Mr. H. G. Sibbald, of Claude, Ontario, with the help of one young man, attended to 350 colonies, harvesting a crop of over 50,000 pounds which netted him \$5000.

In an article in the *Review* for September, 1911, Mr. E. D. Townsend, of Remus, Mich., says that his best year was 1909, when, with 600 colonies, he produced 36,000 pounds of comb and extracted honey, none of which brought less than 8 cts. per pound, and increased to 700 colonies.

Mr. M. A. Gill, of Longmont, Col., in 1907, with a little less than 1000 colonies,

produced \$7640 worth of comb honey, which was sold to C. H. W. Weber & Son, of Cincinnati, Ohio, at above price, f. o. b. Longmont.

The year previous Mr. Gill harvested a crop which netted him \$6400 from 700 colonies.

In the *Review* for January, 1912, Mr. Oliver Foster, of Boulder, Col., said that 1900 was his best year, when, with 587 colonies, spring count, he produced 79,000 pounds of honey, and in addition almost \$200 worth of wax from cappings.

Mr. M. H. Mendleson, of Ventura, Cal., at one time produced 101 tons of honey from 1870 colonies, which, if sold for only 6 cts. per pound, brought more than \$12,000.

Last, but not least, I shall mention a woman beekeeper, Mrs. S. W. Frey, of Sand Lake, Mich., whose net profits, after deducting all costs of production, were \$1000 per year for 1907, 1908, and 1909.

The beekeepers mentioned cover a wide range of territory, which proves that successful beekeeping is not confined to any one location.

Those mentioned are only a very small portion of the big beekeepers of this country. They are the only ones for whom I have seen figures. It may be that they have since had much larger crops. There are dozens of others who have been equally

successful—some who have been much more successful—but these are the only ones of whom I happen to have statistics.

Brother beekeeper, is it not time that you become alive to the possibilities of beekeeping on a large scale, as a profession rather than a hobby? What others have done you can do, if you only think so. Methods and tools are constantly improving. You can be a third more efficient than the beekeeper of fifteen or twenty years ago.

If a man in his eighties can and does produce a carload of honey yearly; if a woman can make a net profit of a thousand dollars yearly, and you, Mr. Beekeeper, can hardly supply your own table, I pity you. Better get into some hobby for which you are fitted, or improve your ways.

Oh! take a lesson from the bee,

And dig in without waiting.

Time flies, your crop will take wing while

Your woes you are relating.

Osceola Mills, Pa.

[Dr. Miller, at least, has made a better record than the one given. In 1913 he averaged 266 sections of comb honey per colony. Of course, these are some of the record yields, and are not to be obtained every year. But any such sweeping statement as that by Mr. Sapp, in the *National Stockman and Farmer*, is very far from the truth.—ED.]

EVOLUTION OF THE HONEYBEE

BY ALLEN LATHAM

That is an interesting letter on page 293, April 1, from the Reverend Mr. Goodacre. His logic is good till he reaches number 5. Queens do transmit that which they themselves do not possess. It is not a question of "can they," for they actually do. Mr. Goodacre's argument can be turned back upon itself. He says the first swarm of bees must have been created outright. Very well, let us assume such for the sake of argument. When thus created was the queen of that original swarm given the power to transmit to her offspring that which she never herself experienced? If the answer is negative, then that first colony must perforce die out, for all progeny of queen and drones must be queens and drones. If the answer is in the positive, then wherein lies the strength of Mr. Goodacre's argument? Can God not give the power to a queen-bee to transmit to worker bees strange functions not possessed by herself in more than one way? Can he not give it thru the

mazes of evolution as well as by direct creation?

It is not well to destroy without rebuilding. Allow me, Mr. Editor, to suggest the possible evolution of the honeybee. We cannot, of course, go back in time and discover the secret. We must discover it thru analogy. Fortunately we have living today bees of various sorts, also wasps and hornets. As the astronomer, unable to read the history of our own sun in the sun itself, seeks its history in a study of the heavenly bodies in view of his telescope, bodies which are suns in various degrees of development, so we can find in the habits of other bees what our honeybees may have gone thru in past ages.

There is the solitary bee which reproduces only the true males and females. There is the social wasp which is but little advanced. Then come the bumblebees. These produce during part of the warm season various types of worker bees, but in fall

the full-fledged males and females. The mated females live thru the winter and start the new colonies the next spring. They must do all the work at first; but soon they have six or eight workers to help, and then the "old lady" *stays at home*. As the season advances the workers grow smaller and smaller. Unlike the honeybee, the bumblebee has not reached a definite type of worker bee. Hornets and certain wasps have a life-history much like that of the bumblebee.

Let us now make a jump away back in time. One of the earliest of all recorded forms of life on the earth is that of the bee. It came down to us imbedded in amber, preserved for our edification. We know that the bee has had a tremendous lapse of time in which to develop the wonderful traits that never cease to arouse our interest. There was plenty of time to allow for the honeybee to exist thru centuries without the worker-bee. The queens were the workers—possibly living solitary at first, later becoming social. Then there sprang up a jealousy, let us suppose, among those equal females. One was sufficient for the colony; why such waste of economy? The next step then was the undeveloped female, brought into existence simply because there was no call for so many egg-layers, but there was a call for

laborers. Wonderful and difficult to explain, but it must have happened. We have them with us, and they must have come about in some way.

At first queens alone lived thru the season of dearth, as the queen bumblebee does today. Then workers acquired that power. Possibly they did not have to acquire it, since they could easily retain it, having been once in their life-history regular queens. It is not difficult to surmise how the honeybee struggled up to its present perfected system of life. It is wonderful, and almost inexplicable, but not at all difficult to picture for one who is willing to let his reason have a little freer rein.

Now for one last statement. The queen does not possess the power to transmit to her offspring that which she *never* possessed. She once performed all the functions of the worker. Doubtless there was a time when the queen possessed a longer tongue, a stronger sting, wax-producing organs, etc. In the long lapse of time these functions have become abortive in her, but not lost, for she gives them to her worker offspring. And the hand of God is here just as strongly as tho the whole wonderful bee-colony was brought into instant existence instead of having to "climb" from a lowly start to the *dizzy heights* it now holds.

Norwichtown, Ct.

A HONEY-FOR-SALE BANNER CLEAR ACROSS THE ROAD

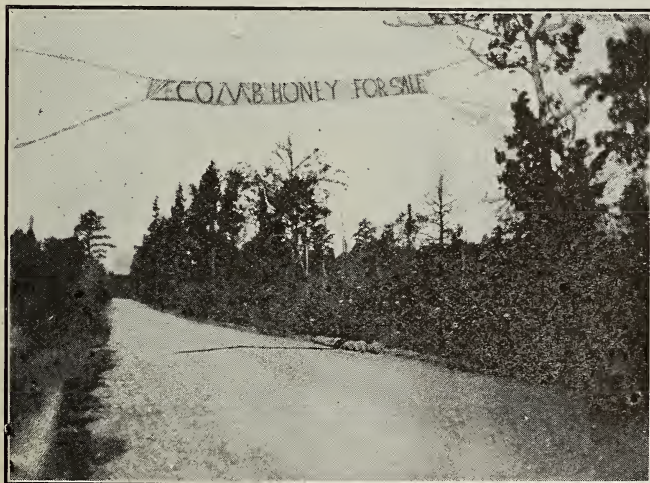
BY S. POWERS

I am sending a picture of a sign which I put up as soon as I secure surplus, and take down as soon as sold out. Some sea-

ons this sign moves as much as 1200 sections, and often the demand is for much more than I produce. This year our comb honey from our early flow was almost a failure on account of bad weather. Four to five days frequently went by when bees flew only enough to secure water; but when it was possible for them to fly they found it.

This sign, which, of course, is home-made, cost 46 cts., hangs across the main road from Philadelphia to Beach Haven, N. J., and to several popular fishing-points. We often have 600 cars pass us in one day Saturday or Sunday.

My extracting-yard

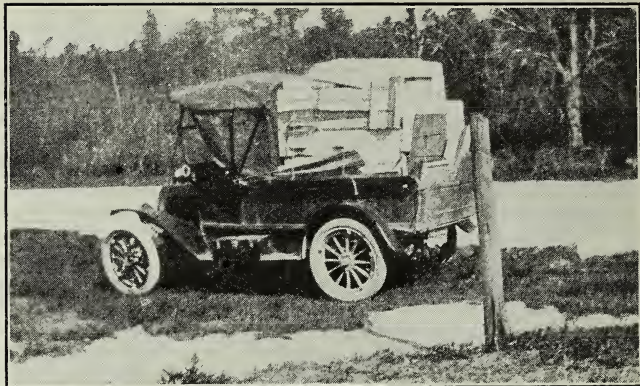


Can't help seeing a sign like this.

in the swamp location has done well. I have used Danzenbaker frames for brood-rearing, but am now changing by degrees to Hoffman, but am going to raise the center pin in the Danzenbaker and use them for extracting rather than destroy them.

I have a converted "Ford" for pleasure or business. An out-yard of 48 colonies is 16 miles away. My home yard contains 29 colonies. I am building up another out-yard, which at present contains 9 colonies. I run strong colonies for comb honey in 4 x 5 x 1 3/8 sections, and the weaker ones for extracted.

At the time the picture was taken I had



"And the little old Ford rambled right along."

a load consisting of 32 Danzenbaker bodies, 52 bottoms, 48 tops, some tin, some canvas, 12 supers, and some 40 pieces 1/2 x 4 x 24-inch strips of lumber. "And the little old Ford rambled right along."

Wading River, N. J.

THE MYTH OF DANIEL McFADYEN WINTERING BEES UP TOWARD THE NORTH POLE IN CANADA

SUMMARY BY MORLEY PETTIT

The story comes from about 150 miles from the arctic salt water in James Bay, an extension of Hudson Bay, in a great plain where bloom abounds for about two months. The honey-flow was said to be great while it lasted, getting 200 lbs. per colony. The bees were wintered in a cave buried in snow.

About ten years previously Daniel McFadyen was crossed in love, went north into the forest with gun, knife, and dog, fell among Indians, learned their language, married the daughter of the chief, and at time of writing had five children, healthy and plump, and as nimble as otters.

The method of wintering was as follows: The first cold night they uncovered the hives so they would get perfectly cold thru, then kept them in a cool place in the shade with covers on loose so as to keep them dry. As soon as a good fall of snow came, a certain cave was packed with lots of snow, then dry bark and the hives on the bark, with bark above the hives, again covering over with dry snow. The secret of success was to keep them frozen and dry all winter, covering over with hemlock brush to keep out the sun. The bees were said to hibernate, eating nothing all winter, but coming out strong and healthy in the spring.

He and his Indian friends kept about

250 colonies of bees, and sent the honey down the waterways toward the settled districts, selling to Indians on the way down, exchanging for furs which were taken down to be sold at the trading-posts.

During these ten years he had produced about 6000 lbs. of beeswax, which he had stored in a wigwam. D. A. Jones, then editor of the *Canadian Bee Journal*, started negotiations with him to purchase the wax, which he was willing to bring down to North Bay and sell at about 10 cts. per lb. Of course, the wax never materialized; but a very ingenious story was sent to account for its non-appearance. The story was as follows:

They had agreed to supply another tribe with bees to start an apiary. Chief Ottomee and thirty of his strong men came for the bees, with ponies. They selected sixty good half-story hives and fixed them up secure with ventilation holes covered with grass. They paid for these in furs and deer-skins. Ottomee and his men started home quite contented with their bees, satisfied with the bargain. They had about seventy-five miles to go, and it would take them about four days to get home. The third day about noon the bees had gnawed the grass covering or netting over the holes and began to come out. They attacked the ponies, and there

was a stampede. The ponies ran wild, and the Indians had to run into a swamp. Some of them got home ahead of the men, which made the Indians at home think that there had been war, and fifty started out with ponies, armed, to avenge their people. They met the others next day in a sore condition, both in body and mind. They thought the white man called Dan was linked with the spirits of rattlesnakes and wildcats, which had possessed the ponies. They were going to kill him, but he had wisely taken to the woods. They then started setting fire to wigwams, and among the others fired the wigwam containing the 6000 lbs. of beeswax. The wax got to burning, and produced such a hot flame, and burned such a length of time, that they were sure they had finally got rid of the spirit of the white man, and went off contented. This was McFadyen's ingenious story to prevent investigation of his wonderful yarn of "beekeeping in the North."

In the *Canadian Bee Journal* for 1888, Vol. IV., page 632, J. H. Martin, who was

afterward so well known to readers of *GLEANNINGS* as "Rambler," tells a story to match Mr. McFadyen's story.

He says, "We find that the Dog Rib Indians living near the Great Bear Lake annually consign a greater portion of their tribe to the bottom of the lake in hermetically sealed cases, where they remain with animation suspended for several months, and upon the approach of warm weather they are fished out and restored by the animate portion of their tribe. In corroboration of the above there are Hindoo jugglers who will allow themselves to be buried several days with seemingly no injury.

"It would certainly be an economical method for both bees and beekeepers to get thru the winter with suspended animation. In fact, they will be obliged to if we have many more seasons like the past."

In a postscript Mr. Martin avers that there is as much truth in this story as in Daniel McFadyen's, and wants it accepted in the same sense.

Guelph, Ont.



Mr. C. Hanson Bocock, the expert on bee diseases sent to this country by the British Government to investigate the new disappearing disease found in this country. See editorial, page 839.



Winesap apple-tree. This is in the orchard shown on the cover for GLEANINGS for April 15, 1916. Sales of apples in one year were over \$8000 in value, the trees covering some 25 acres in extent.

THE DANGER-POINT IN HEATING HONEY

BY GEORGE SHIBER

On page 98, Feb. 1, Mr. Doolittle says that granulated clover and basswood honey will be as clear as when first extracted when heated to no more than 145 degrees. The latest edition of the A B C that I possess, 1903, on pages 130 and 132, gives 160 degrees as the highest point that granulated honey can be heated. Of course that was orthodox some years ago; but I believe that later editions have lowered the figure.

My experience makes me feel that all of the above temperatures should be lowered, and that 130 degrees is as high as we can go if we wish to preserve a fancy article that has granulated. My experience has been entirely with basswood and clover honeys. Mr. Doolittle's "time," tho, is about what I allow for seven one-gallon cans.

I have a square galvanized boiler three or four inches higher than the one-gallon cans. A wooden false bottom on which the cans rest, about 1½ inches from the bottom of the boiler, protects the honey in the bottom of the cans. The boiler is filled with water, and slowly heated to 130 degrees—no higher—and left to remain at this point for three hours. The honey will be practically as clear and fine-flavored as when first extracted. But it will lack just the least little bit in color and flavor. To tell the truth, I have not found a perfect plan for liquefying candied honey. Of course, this slight difference would not be detected, as a rule, except by those who are experts in honey taste; but if we allow the temperature to reach 145 or 160 degrees the color and flavor will deteriorate to a very marked degree.

The directions on my labels say that the water should be no hotter than one can bear the hand in. This is not very definite; but one can feel sure that the honey will not be burnt. However, I have seen my own clover honey, originally fine and light-colored, made like black molasses by a customer who thought he knew just how to do it. I do not know of any way that clover honey can be put up for the trade that will be granulation proof, but I am studying the question. Heating it to 130 degrees and sealing while hot, or at once, is the best way I know of, and works very well; but there is an occasional exception where such honey will granulate.

THE SAVING OF STORES IN A CELLAR.

On page 114, Feb. 1, Mr. J. L. Byer figures on 35 pounds net as the safe amount

of stores for winter in Ontario, and he estimates the cost at 6 cts. a pound, which would be \$2.10. Looking at it from every angle it seems to be expensive wintering. Western New York has some pretty cold weather, as a rule; yet I would feel safe in wintering outdoors with 25 pounds net, costing, according to the above, \$1.50. This is expensive enough.

A few years ago I changed from cellar to outdoor wintering, and wintered fairly well. I found out one thing, however, and that was that it took more stores to carry them thru to settled weather in the spring; and while I have never weighed stores to see how much had been consumed, I think inside wintering can be done at a saving of one-third in stores up to the time the colonies are carried out in the spring. I feel pretty sure that 12 to 15 pounds will carry strong colonies thru the four to four and a half months of confinement; and those same bees, if wintered packed outdoors, would consume, I believe, four or five pounds more. This would make a saving of twenty-five or thirty cents, and that would pay for carrying them in and out. But I would rather have colonies which had consumed only 12 pounds during confinement than those which had used 18 pounds during the same time. I should consider that, the more they had eaten, the weaker they would be.

WHEN IS THE GREATEST LOSS IN WINTERING?

My experience says after about the middle of February, whether wintered outdoors or in the cellar. The wintering problem is very easy up to that date; but after that time is when the losses occur. Some years I have had the greatest loss in April; and judging from reports I see others have had the same experience. The strong colony that consumes the least and stays quiet usually makes the best showing. These are some of the reasons why I have dispensed with packing-cases and have almost all the bees in the cellar according to the way I used to winter, and the method I have found the most satisfactory.

On page 116, Feb. 1, the editor says, "If you can shake more than three pounds on the average from your colonies in early spring, you are going some." Well, I should say so; and he might add to the above that one could take 12 framers too. Why, there is many and many a colony of but two pounds of bees the last of April (or early spring) that will be up to the mark when

the crop is harvested if they have plenty of stores.

The most valuable bees are those that have not been more or less worn out by

dysentery brought on by poor stores or excessive eating to maintain the required heat.

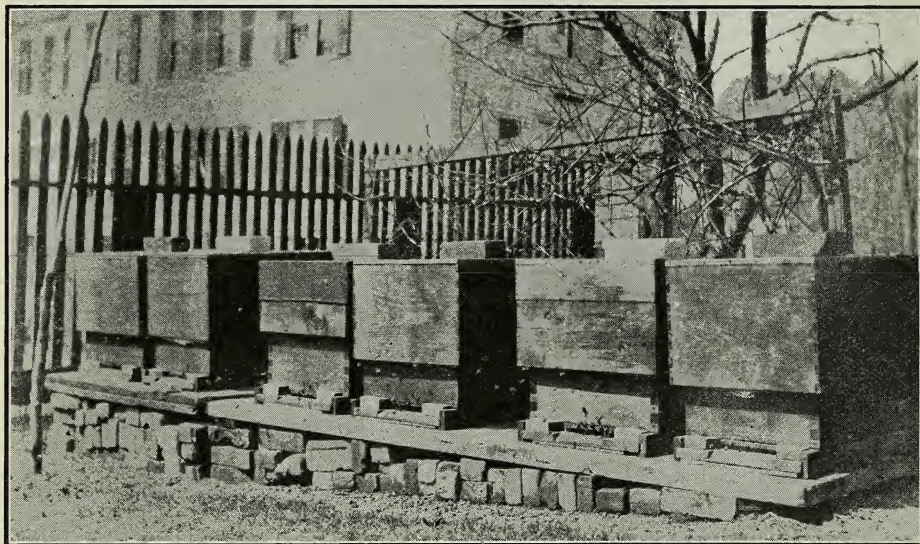
Randolph, N. Y.

NEWSPAPERS AND TELESCOPING COVERS FOR WINTER PROTECTION

BY F. R. S. BOND

The photograph shows the bees in my back yard. They are facing the south, and are just behind a hen-house which is nearly

super-cover; then a super filled full of folded newspapers. This was covered with another super-cover, and the five thicknesses



F. R. S. Bond's backlot apiary in winter quarters, Worcester, Mass.

20 feet long. This was taken in the spring, showing the hives just as they wintered. The paper wrapping under the covers can be seen on some. Over the body was the

of wrapping-paper were folded over the whole, and covered with the telescope cover pressed on. Every colony came out strong.

Worcester, Mass., June 6.

IN THE HIVES BUT NOT IN THE CANS

BY F. GREINER

When I read the editorial, Aug. 1, in which special mention is made of the McIntyre plan of obtaining *all* the honey from cappings, I expected to find something more satisfying than I did. The heading of the article is misleading to begin with. It is a misnomer, for you don't obtain the honey at all except that which drains from said cappings in the uncapping-box. I am here reminded of the sailor boy who dropped the captain's golden drinking-cup overboard by accident; then, in his consternation, came to the captain and asked him

if he considered a thing lost when he knew where it was, to which the unsuspecting captain replied: "You little dunce you, how can anything be lost when one knows where it is?" The cunning little fellow then said, "Well, then, the captain's drinking-cup is not lost, tho it is on the bottom of the sea."

It is a good deal so with the honey the bees extract from the cappings by the McIntyre plan. It is in the hive but not in the sixty-pound can.

It seems to me the McIntyre plan has no advantage over our long-practiced plan of

placing the cappings in the solar after they have had a day or two of time to drain in the uncapping-box. The McIntyre plan has the disadvantage of making an extra very bulky implement necessary. We have already more such than we want. The old plan makes no such demand. The solar separates the honey from the cappings without cost, and gives us the wax in a solid nice cake besides. It is true the honey obtained by the solar melting process is not as nice as the honey that drains from the cappings; but we get it. It answers well for feeding. The comb-honey producer can use it to advantage for feeding back to have unfinished sections finished up. I never have any too much of such honey for my purpose. The honey obtained at the close

of the season from unsealed combs, together with this exceptionally heavy honey from the solar wax-extractor, is usually just about sufficient to have the 30 or 40 cases of unfinished honey, which I usually have, finished up by feeding it back to six or eight well-working colonies at the close of the season.

Some years ago we used to wash the honey out of the drained cappings and make vinegar from the sweetened water, either in combination with cider or pure; but honey vinegar does not find favor with the general public. Even the best cider vinegar finds a slow sale, so we have discarded that practice and put the cappings thru the solar as stated.

Naples, N. Y., Aug. 26.

BEE-NOTES FROM HOLLAND

Our Wintering Problem

BY J. H. J. HAMELBERG

As has already been pointed out, our skeps require but little preparation for winter. Whatever may be said against these old-fashioned structures, they surely are ideal winter-homes. I have wintered blacks in them without finding a single dead bee on the bottom-board in early spring. I really consider it a pity that a modern hive, without losing the advantages of easy handling and accurate fitting of its fixtures, cannot be made of straw bands, twisted by hand and held together by stripped bark or cane, as is done with skeps. Of course, one could make a board skeleton and have it covered with straw all around; but it would not be the same. Neither would a hive of compressed straw answer as well. It seems that this platting of the straw by hand is just the thing for the right kind of ventilation and the proper escape of moisture; but this handwork at the same time prevents obtaining the accuracy in dimensions needed for the fixtures of a modern hive.

For those who keep their bees in hives, the wintering problem offers far more difficulties. Our winters can be very cold and can last long, altho in late years we have had only mild winters. But my experience is that these mild winters, with their lasting rains and fogs and sleet, and the thermometer still not rising much above 40 degrees, are far more to be dreaded than a spell of freezing weather. The comparatively mild temperature causes the bees to move about too much, to consume a great amount of stores, and to commence brood-rearing too early. Besides, my experience is that it is

much easier to protect bees against cold than against moisture.

All beekeepers have their own fancies and hobbies, and act up to them, and this applies especially to our systems of wintering. Some prefer wide entrances, others think they can hardly make them small enough. One believes in leaving plenty of room between the bottom-board and the bottom-bars of the brood-frames; others consider a passage a trifle over a bee-space quite sufficient, etc. It would take up too much room to describe the different ways in which bees are wintered in this country, and so I will give only my own, not because I consider it the best, but because I am most familiar with it.

To combat the danger of moisture gathering in the hive I always take particular care to use plenty of absorbing material in and over my hives, which, as is general in this country, are wintered on their summer stands. For absorbing material I have never found anything superior to what is called peat-dust, being the refuse which accumulates in the drying and transportation of peat. It can be bought for \$3.00 to \$4.00 per ton, packed in compressed bales of about 200 lbs. each. On either side of the brood-nest I put a follower the width of an ordinary brood-frame, filled with this material. However, I do not nail up the sides of these followers with thin boards, but tack stout yellow cotton over them, as any moisture is thus more readily absorbed by the peat-dust inside; and these followers, not being thicker than an ordinary

brood-frame, they allow room for eight frames of stores which I need in my Danzenbaker hives. Above the inner cover I put a super, filled with the same material to about an inch from the top, and then put the cover over all. When the bees have not had the time to seal the inner cover of the brood-chamber with propolis (which may happen on account of feeding them up too late in the season as a result of a late delivery of sugar by our beekeepers' association), I paste strips of paper over the cracks between the inner cover and the brood-chamber. I consider an entrance of $2\frac{1}{2}$ by $\frac{1}{4}$ inch quite sufficient, and close the summer entrances up accordingly.

The inner covers I use in wintering all have a hole in the center to fit the mouth of a common fruit-jar, which enables me, if

necessary, to feed the bees in early spring without disturbing them, and with no fear of robbers. Before putting the peat-dust in the supers, this hole is covered, of course; but I think it essential to use a very thin board for this purpose, and I prefer to have it fit not too nicely, so that the moisture, rising up from the center, may be absorbed readily by the peat-dust above.

With this system of wintering I lost a colony only once. This colony had been fed in autumn with syrup made of unrefined cane sugar. I found the top-bars of the brood-frame of this colony smeared with excrement, and I noticed a sour smell coming out of the hive, which convinced me that the food and not my system had been at fault.

Soest, Holland.

WINTER PROTECTION WITHOUT LOOSE PACKING

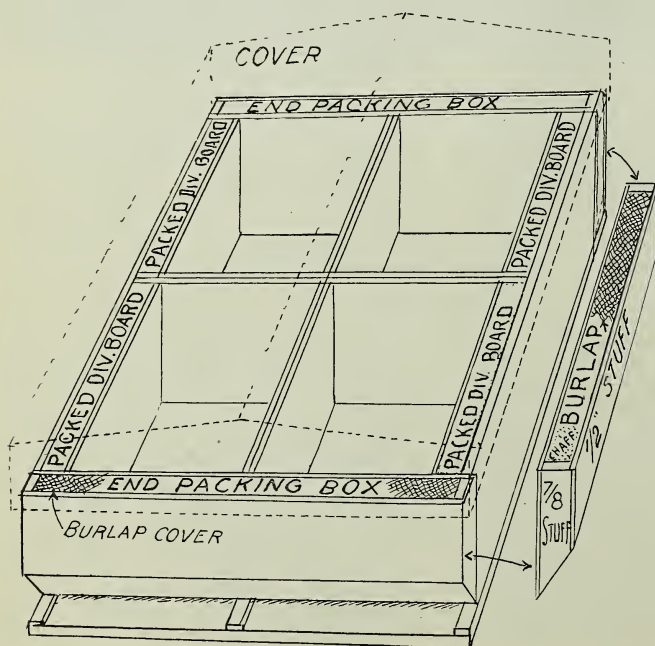
BY H. H. SMITH

I have tried nearly all methods of packing bees for outdoor wintering. While I have had success with most of them if the colonies were in good condition, with young bees and good stores, I have found that nearly all the methods have some serious drawback. The single-colony double-walled hive is expensive, and heavy to handle. Properly made cases to hold four colonies cost nearly as much as the four hives, and

I never could get used to the muss of loose packing material in the fall and spring. Besides, there is not one part of a packing-case which can be used for any other purpose during the season after bees are taken from the cases.

The drawing shows the way I wintered a part of my yard last year. I make a frame of 2×4 scantling, large enough to hold four colonies, 2 colonies facing east and 2 west. Two pieces of 2×4 scantling, 6 inches apart, run across the center of the frame to support the back ends of bottom-boards of each pair of hives. This arrangement allows the hives to be spread apart during summer.

At feeding time in the fall two outside combs are taken from each colony, and a chaff-packed follower or division-board is put on in their place. These division-boards are made of a frame of $\frac{1}{2}$ -inch pine 2 inches wide and $\frac{1}{2}$ inch shorter than the hive is long inside. The sides are made of wall-board, manufactured by the concern that makes paroid



roofing. Chaff or sawdust will do to fill the space between the sides. To make the division-board fit snug when put into the hive, a piece of burlap is made into a roll about the size of a lead-pencil, and tacked to the two ends and bottom.

At packing time the four hives are placed close together, and a box holding four inches of packing is fastened at each end of the group as shown in the drawing. Over all is placed a large cover holding 6 inches of packing, the packing held in place by burlap tacked 2 inches from the lower

edge of the cover. This arrangement has all the advantages of the large packing-case, and none of the muss caused by loose packing. The end packing-boxes can be set up in groups of twelve, still filled with the packing material, and covered during the summer with one of the large winter covers. The chaff-packed division-boards are very useful during the summer for protecting weak colonies. With this wintering arrangement no extra bottom is needed, as with the large-case loose-packing plan.

Palermo, Ont.

WINTER PROTECTION FOR TWO CENTS A COLONY

BY DANIEL DANIELSON

For more than thirteen years I have lived in Colorado and have tried nearly all plans of wintering. I have tried the cellar but that is not satisfactory here, as it is too warm. I have left the colonies outdoors unprotected, and in some winters they do fairly well; but in other winters there are severe losses. Therefore I concluded to try outdoor protection.

For the last three years I have put my hives together in the fall in long straight rows, running north and south, alternating the entrances east and west so there is an entrance only at every other hive on the same side of the row.

I always winter my colonies in two-story hives, the bees usually staying in the upper story during the winter.

I cover the whole row with felt or tar paper, putting one roll of paper on each side and folding both upper edges over the top of the inner cover, and then put the regular

cover above as shown in the picture, page 362, May 1. I nail lath on each side below the cover to hold the paper in position. The material for this method of protection costs about two cents per colony, and the labor is a very small item. For Colorado I find this protection is cheap and practical. When the sun shines on the paper in the winter it warms it up even on a cold day.

EASY WAY OF BUILDING UP THE WEAK ONES.

By removing the outer cover I can fold back the paper and examine any colony that I wish by removing the inner cover, afterward putting the paper back in position as before. I leave the protection on until May, when all the colonies are scattered around, so as not to be in regular rows. At the time I make this change, if there are any colonies that are weak I leave them in the row temporarily, and they catch the stray bees and thereby become as strong as the rest.

Brush, Colo.

COMMERCIAL QUEEN-REARING IN SOUTHERN CALIFORNIA

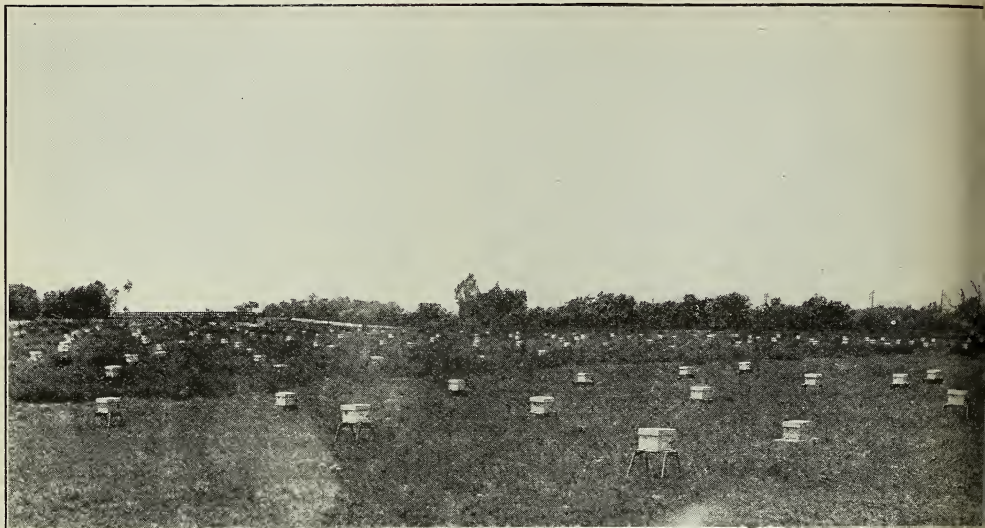
BY HOMER MATHEWSON

The subject of this sketch, Mr. Henry Perkins, was born in Hamilton, Ontario. When but a small boy his parents emigrated to San Diego Co., Cal., where the father is still engaged in beekeeping.

Under the direction of his father he became a successful beekeeper; and when the possibilities of Imperial Valley became known he emigrated to Heber, where he established the first large apiary in the county. This venture was crowned with success. The following year he shipped the first car of honey from the valley. He continued to maintain a large apiary here for some years. Disposing of his holdings here he went to Ventura Co., Cal. Here

he spent a year with Mr. Mendleson, who counts his colonies by the hundreds. After much prospecting he finally located at Artesia, Cal., and commenced the rearing of queens upon a commercial scale. His apiary is located on the banks of the San Gabriel River, about a mile from the town. For this industry the location is ideal. The yard shown in the illustration covers about four acres. The surrounding country produces enough honey for building colonies nearly the whole season, but not enough for profitable yards, hence their absence, making it possible to get pure matings.

At present Mr. Perkins has 300 twin mating-boxes, and 125 single ones, making



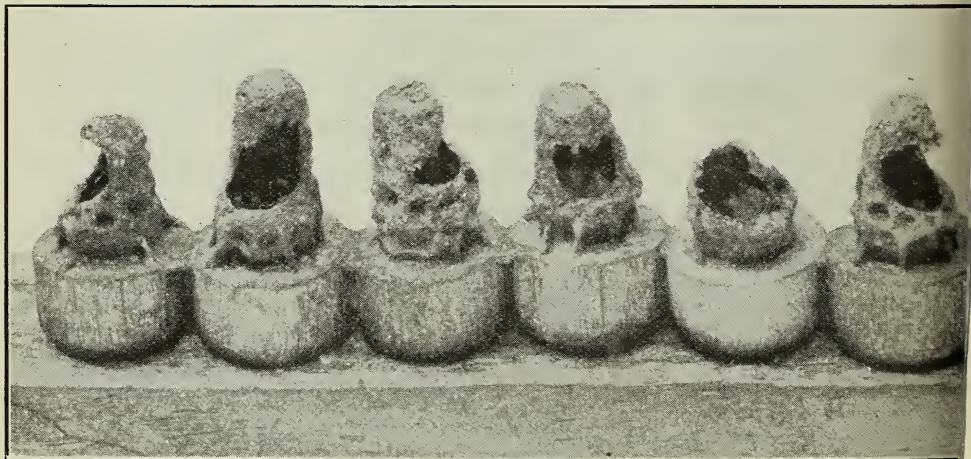
725 mating nuclei in the queen-rear-

725 units on stands convenient for manipulation; 75 colonies are used for cell-building.

Mr. Perkins uses practically the same method as other breeders. The cells are transferred to the upper story of strong queenless or superseding colonies to make sure of being well fed. The cell-building colonies are fed while cell-building is in progress. After ten days the cells are given to the nuclei for mating. It seems that, the smaller the nuclei, the more sure the mating. Each nucleus will average seven

queens per season, and oftentimes two per month. An allowance of 20 per cent is made for loss in mating and poor queens. The nuclei are fed once a week with a very heavy syrup.

The feeder used by Mr. Perkins is one of the best I ever saw; but it is not adapted to cold climates, inasmuch as it is on the outside of the hive. It is of his own invention, and it comprises several features. Each feeder is double, serving one or two colonies at the same time. Being on the outside of the hive, and so constructed that no robbing



After the battle. By accident, a batch of cells was left a day or so waged an unfair war upon her helpless sisters still in their cradles. Every queen will not stand for competition.—See next page.



725 mating nuclei in the queen-rearing yard of Henry Perkins, near Artesia, Cal.

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can take place, it is possible to feed at any time of the day.

This industry represents the investment of several thousand dollars. The capacity in the height of the season is above 800 queens per month. One of the interesting features is his system of signs indicating the condition of a nucleus, whether queen-right, virgin, or queenless. In filling the cages for shipment he has a method of getting the queen to run into his half-closed hand where she is held prisoner while the cage is supplied with bees, and then the

queen is run in of her own accord, never being pinched or handled in any way.

One of the little "big things" which time and patience have perfected is the idea of using pure wax for cells, using nothing but the best new white comb.

Mr. Perkins has finally exterminated all black bees in his range, hunting them out of trees, stumps, buildings, and, in one case, from under a water-tank. In some cases the queen and drones were sifted out and the bees used for nuclei.

Lexington, Ky.



After the battle. By accident, a batch of cells was left a day or so too long in a cell-building colony. The first virgin that hatched, true to her nature, waged an unfair war upon her helpless sisters still in their cradles. Every queen will not stand for competition.—See next page.

AS GLIMPSED THRU THE CAMERA

BY H. H. ROOT

The pathway of a queen-breeder is not always strewn with roses; there are unexpected thorns. The weatherman plays unkind pranks, and takes delight in making the most experienced prophet so badly mistaken that he will prophesy never again. Just when the breeder gets everything going fine, sudden cool weather will come on followed by cold rains, and all plans have to be set aside and new ones made. One week the breeder may have a big surplus of queens; then in just a few days there won't be a queen in sight, nor immediate prospect of getting any. The unhappy victim of circumstances has little to do but look out on the cold dreary world and look in on the letters from his angry customers

tore great holes in the sides of the other cells and mutilated the helpless inmates, the bees meanwhile organizing a "wrecking-crew" and clearing up after her as best they could.

The engraving shows one of the bars of cells, every cell a complete wreck. Whether the young queen tore all of the side of the cell away herself in her frantic efforts to kill her rival, or whether the bees removed a part of the wax in cleaning out the remains, I do not know.

CLIPPING QUEENS.

To the beginner this process is one that is cordially dreaded. It is not difficult, however—the easiest thing in the world, in fact.



The easiest way to clip a queen.

demanding that their orders be filled or their money returned.

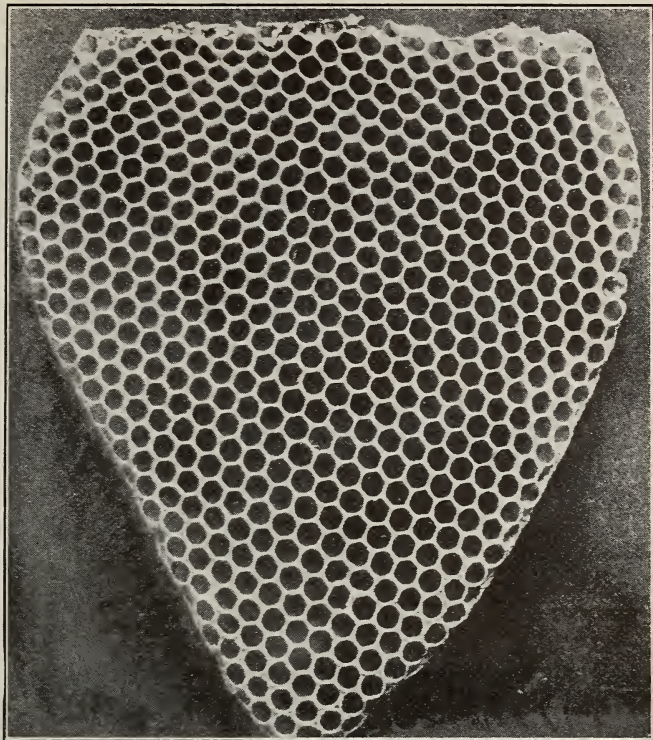
But it is not of the weather that I intended to write. The queen-breeder has to be a careful man, and withal a good book-keeper. If there is any mistake in his figures that mistake is likely to be a costly one—so costly that the breeder groans to himself that "life is just one blame thing after another, anyway."

This summer, for once in his experience, Mr. Pritchard happened to make a mistake of one day in his figures. Two bars of cells were left a day too long; and the first virgin out, true to her instinct, immediately slaughtered all her unborn sisters. With the one passionate idea of reigning supreme or not reigning at all she

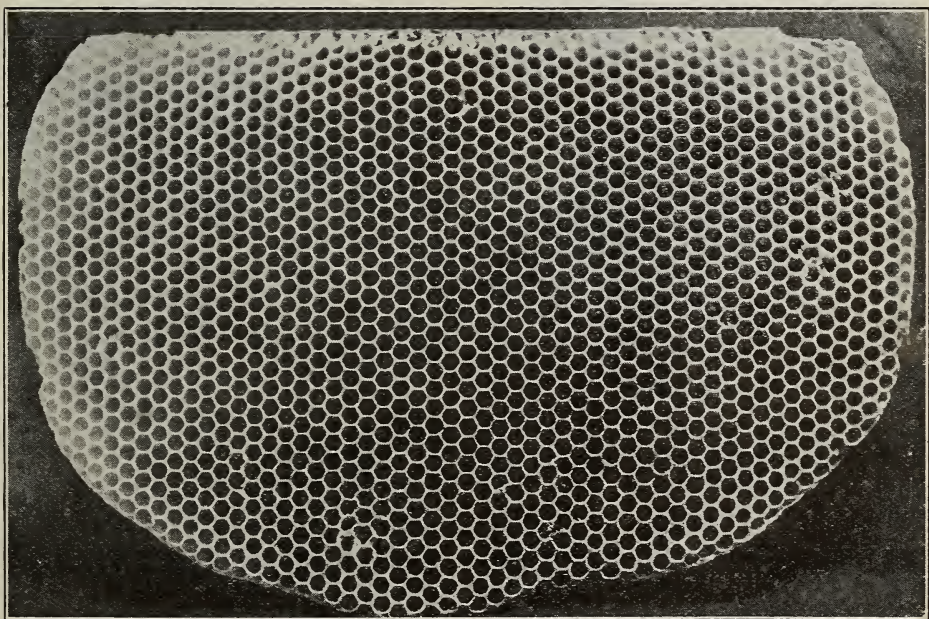
It is well to practice on a few drones first, catching them by the wings between the thumb and forefinger of the right hand. Transfer the bee to the thumb and forefinger of the left hand, placing the under side of the thorax on the ball of the finger with the head toward the other fingers, the thumb meanwhile pressed very lightly on the thorax just enough to keep the bee from getting away. Particularly in case of a queen, always try to catch the wings on both sides in order that she may be prevented from buzzing around and getting badly frightened. When she is in position between the thumb and finger her legs will grasp the end of the finger and the wings will nearly always stick straight out. There is then no danger of clipping a leg, and the

wings are clipped in much less time than it takes to tell about it.

If you are timid about picking up the queen from the comb, take a piece of soft iron wire about No. 16 and bend a small loop or eye in each end. Bend the piece of wire around, forming a letter U, so that the two eyes are not over three-quarters of an inch apart. Tie a rubber band across, and by holding the wire in the left hand it is not at all difficult to imprison the queen as she walks about on the comb, by setting the rubber band down on her back. In this position she may be clipped with the scissors in the right hand while thus held on the comb: or, after being caught, she may be picked up by the thumb and finger of



A sample of natural comb with the rows of cells running vertically, and two parallel cell walls horizontal.



Another sample just like it.

the right hand, transferred to the left hand, and clipped as described above. I believe, however, that the queen is less frightened if calmly picked up from the comb and quickly transferred to the left hand without any rubber band or any other device.

WHICH WAY DO THE BEES BUILD COMBS?

Every now and then some one tries to start a discussion by arguing that the bees when building natural comb always build it in such a way that two parallel cell walls are vertical so that the rows of cells are horizontal. There is abundant proof to show that bees often build comb the other

way. Most of the pieces of natural comb that I have seen are built with the rows of cells running horizontally; but here are two pieces of comb that I found this summer, both of them with two parallel walls horizontal so that the rows of cells are vertical. I doubt whether it makes very much difference to the bees. It is claimed that the comb is less likely to sag if not built this way. This I am ready to believe, altho I have never seen any positive proof.

If it happens to be more convenient when cutting up foundation to cut it in such a way that the rows run vertically is there any objection to so doing?

SOME ADVANTAGES OF A BEE-EXCLUDING FRAME

BY MARK W. MOE

A frame covered with wire netting, which might be called a bee-excluder, will be found convenient for several purposes. The outside dimensions should be the same as those of the hive it is to be used upon, with a bee-space on the upper side, the same as a queen-excluder, bee-escape, or any other article used on a hive. It should have *two* layers of wire netting, because, if only one layer is used with supporting-strips, it would allow too much space under the frames in the hive-body or super above it. If used without supporting-strips the wire netting would be likely to sag enough in some cases for bees to pass under division-boards resting upon it. If no bee-space is provided on top, there is danger of killing bees, and sometimes queens, under the frames.

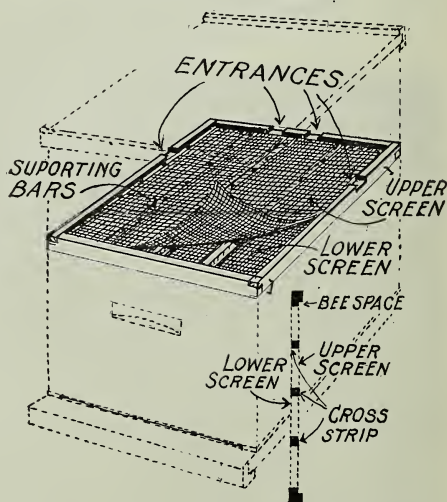
I much prefer to use this bee-excluder instead of tacking wire netting on the bottom of a brood-chamber, as advised in the A B C and X Y Z of Bee Culture, for mating queens in nuclei in an upper story, and I also prefer having the outside entrances made in the bee-excluder rather than in the brood-chamber above it.

Among the uses which may be named for the bee-excluder are:

1. To close the hive in moving bees.
2. To separate a weak colony from a strong colony below, for the purpose of building up the weak colony, when, for any reason, it is feared that either queen might be lost if a queen-excluder were used.
3. For the purpose of introducing a queen with absolute safety, by releasing her on frames of hatching brood over a colony. The bee-excluder is placed between.
4. For providing a place to put brood,

with part of the bees adhering, in carrying out any of the shaken-swarm methods.

5. For mating queens in an upper story. Simply fasten it to an empty brood-chamber, with hive staples; provide bee-tight division-boards, and canvas or enamel-cloth to lay over the frames. When thru mating queens, remove the bee-excluder and your brood-chambers are ready for any other use, with no unsightly holes in them.



Also, if a beekeeper happens to be using closed-end frames he can still use an upper story for queen-mating nuclei just the same, and without cutting away any part of the ends of his frames.

6. By providing one or two holes for bee-escapes, to be covered with metal slides or pieces of sections when not in use, the bee-

excluders can be quickly transformed into ventilated bee-escape boards.

In one of my screens I have four outside entrances. This is for the ten-frame hive. I would have only three for the eight-frame hive, one on either side, and two at the back. My idea is, to place a small alighting-board on the back, long enough to reach under both entrances, with an upright partition coming just between them, with the

opposite sides painted different colors. If I find that this does not work satisfactorily I can give one middle compartment a queen-cell, and, about five days later, one to the other middle compartment, keeping a zinc queen-excluder over the entrance to the latter until the first queen is mated, then transfer the zinc queen-excluder to the entrance of the mated queen.

Bristol, Col.

WHY I NEVER LOST A COLONY IN WINTER

BY J. F. KIGHT

The clover harvest closed here about Aug. 1; and while the bloom was more abundant than has been known in this state for a long time the flow of nectar was not more than fair.

Sweet clover came in a little earlier than usual, and seemed to have quite a lot of nectar. Today, August 17, it seems to be about all gone to seed.

White aster will be the next on the bill of fare, and there seems to be an abundance of it. It remains to be seen whether or not it produces a good flow of nectar. I am extracting rather closely from the outside frames of the brood-chamber with the hope that these combs will be filled with the aster honey. For outdoor wintering I have no fears from it whatever.

I wish to tell the beginner how I manage to bring my bees thru our Indiana winters with no loss of colonies. In the first place my hives are all ten-frame. I see that each colony has not less than 35 lbs. of honey the 15th of October. I then go thru them and place the lighter combs with no brood on the outside, thereby moving the honey nearer the center. After this is done I place the queen-excluder back in its place, put on the shallow super empty, and fill it with some kind of absorbent of moisture. First I place a very thin piece of muslin over the queen-excluder; then fill in with dry leaves or anything dry that will take up the moisture.

About Nov. 15 I wrap each hive with a thin tar paper to keep the wind from entering the hive only in front. The entrance is now contracted to the regular winter entrance, viz., $\frac{3}{8}$ by 5 inches. I hear some say, "Why keep the queen-excluder on?" To keep the bees from having to go around the end of the frames when it becomes necessary to change to another honey supply, when all they have to do is to crawl between the top-bars of the frame and the queen-excluder, which is a space of $\frac{1}{2}$ inch.

I have never lost a colony of bees from cold weather wintered in this way. If the apiarist lives in Indiana climate he should not remove this covering until settled warm weather, which is from April 20 to May 10. Don't hurry; more harm is done by this mistake than one would surmise.

Indianapolis, Ind.



Bumblebee making it hot for a honeybee. Some of the other bees took part in the fight, but too late. Both bees were dead when found.

IS IT A NEW OR OLD TROUBLE?

BY W. C. MOLLETT

Last winter I began to notice that there were more dead bees at the entrances of some of the hives than I had ever seen before. These were mostly very strong colonies. I did not think there was a disease, but rather thought the condition might be due to the weather, and I expected they would be all right when the weather became better. The winter was very changeable—very warm for a few days, and then suddenly cold, and there was considerable rain and damp cloudy weather.

I thought also it might be due to the kind of honey the bees had gathered, or some little matter which would soon right itself. I began to notice closer, and I perceived after a cold night there would be a great many apparently dead bees at the entrance of the hive; but when the sun came out a great many of them would begin to crawl around, and try to get back into the hive. I noticed also that the bees were carrying out many bees that were not dead, but seemed to be affected in some way. When I opened the hive a considerable number of bees would begin to crawl over the tops of the frames in a slow manner, as if they were just about to die. These would usually be of a very dark color as if the fuzz had all been worn

off them, and they usually seemed to be smaller—considerably more so than they should be. When any of them were carried out or brushed off the frames they would crawl around for a while and then fall over on their backs and tremble, and keep their legs moving for some time and then die.

These conditions kept on till spring came, and the colonies were so weakened that they could not build up enough to gather any honey to notice. Some of the bees seemed to get well when the weather was warm—at least the dead bees did not show up so much; but some of the colonies kept on in the same way all summer, and are still dying just as they did in the winter.

I first thought it was spring dwindling; but this disappears early in the summer. I am under considerable uneasiness lest it may keep up and finally affect all the colonies, which would completely ruin the prospect, for the time at least. It seems to affect only the adult bees, and does not have an odor of any account.

Stonecoal, W. Va.

[This is probably a case of bee paralysis. Usually in such cases a change of queen will affect a cure.—Ed.]



Straw skeps made large enough to cover an ordinary hive and super, making the scene artistically old-fashioned, and providing considerable protection as well. From O. GALLRELL, Newburyport, Mass.

IS A LAYING-WORKER COLONY WORTH SAVING?

BY E. S. MILES

There has been a good deal written on the subject of laying workers. On page 879, Nov. 1, 1915, Dr. Miller gives a good description of the indications that they are present in a colony. It might be added, however, that the unsealed larvæ from laying workers will not be regular and even in size as from a normal queen. Sometimes a defective queen will have scattering and uneven-sized larvæ, somewhat similar. An experienced apiarist will also nearly always detect an unnatural action of a colony with laying workers, altho this can hardly be described so a novice would understand. One more thing, noticeable in many cases, I think, is several eggs in a cell of any drone-cells in the brood-nest.

"The cure?" Doctor Miller says, "The best cure is to break up the colony." I cannot agree with our good friend, unquestioned authority tho he be on bee matters in general. I have found that a laying-worker colony will accept a ripe cell in most cases, if found soon after this abnormal condition begins. If not found soon, and the colony is weak and the bees all old, they are of no value to another colony, and quite liable to be killed rather than be accepted in uniting. My experience has been that workers take to laying only when the season is so that the bees are anxious to breed, and no queen is present, nor brood from which to rear one. At such a time normal stocks are strong with plenty of brood, and the addition of a few old bees, even if one succeeds in uniting, is of no practical value, and, unless one has more colonies than desired, the following process is recommended to get rid of the laying workers and at the same time build the colony up.

Go to any colony strong enough to spare one or more frames of brood, and select

combs that are well filled with sealed brood—hatching brood if possible—putting in their place the combs of laying-worker brood, after having brushed all the bees from them. Select, in this way, and give to the laying-worker colony as many combs of normal brood, a good share of it sealed, and ready to emerge, as they had of the abnormal brood from the laying workers. From two to four frames should do; and let it contain also some eggs and young larvæ. If the laying workers have been neglected until they have considerable sealed brood, take a sharp uncapping-knife and shave the heads from it before putting it into the normal colonies, and they will promptly throw it out and use the combs aright.

The laying-worker colony treated this way any time during the working season, when a living or more is being gathered, will usually rear a fair queen; but the best way would be to have a ripe cell from good stock to give them in from three days to a week after giving them the normal brood. It would be well, too, if giving a ripe cell, to destroy any cells built on the brood. I am not up on the philosophy of this treatment, but suppose that the removal of the abnormal brood, and giving a good supply of normal brood perhaps leads the bees to neglect the laying workers; and plenty of young bees being on hand by the time the larvæ from the eggs given are of proper age for queen-rearing brings the colony to about the condition of a colony whose queen has been suddenly removed; hence they will build cells and accept cells ready to hatch. I have had this experience on quite a few colonies with laying workers. Let others try it and report whether it is successful as a general rule.

Dunlap, Iowa.

TIDBITS

BY ARTHUR C. MILLER

What is the homing instinct of the bee? Does a bee find its home by appearances? In the language of an ancient investigator, "Can a bee remember a hole in the air?" Search me if you wish, but I carry not the evidence. However, on September 2, 1915, bees flew from a nucleus for a short time one morning, then the hive was closed and removed. At night about 150 bees were clustered on the concrete walk near where the hive had stood. Each noon thereafter

a few bees were to be seen hovering near the place. At nightfall, September 16, on the same spot 126 bees were gathered. What is a bee's home, anyway? And, say, do you suppose they had their own hive odor? I might ask some more awkward questions, but I guess these will suffice now.

Ever watch crows circling about a tree where an owl was roosting? Ever watch king-birds darting down at a crow or other

enemy? Saw a half-dozen bees acting thus over a clump of grass. Couldn't hear any "cawing" nor any scolding chatter; so, being sure they were neither crows nor king-birds, I investigated. Discovered that all the bees were not in the air. One was tail up under the palm of my hand as I put it down. Also discovered a clipped queen crawling rapidly about. Guess she was tired of housekeeping or else was a suffragette. Belonged in a baby nucleus about six feet away. She had filled things with eggs, and gone forth for a larger world to rule over or for some other near reason. No, the bees had not swarmed out. She had just ambled forth on her own account. She was returned to her hive, and a week later was found in another nucleus ten feet away and around a corner of a building. She had destroyed a fine queen-cell and gone to housekeeping again. Fickle jade! Are you good at guessing? Go ahead.

There are two trees which do not make good neighbors to a beeyard—"balm of Gilead" poplars and pines. Too much and too sticky propolis. Recently I went from a yard close to the seashore and far from trees to one among pines. I was very much stuck on the hives of the latter, so was everything else that got next to their insides. My! but wasn't that propolis soft and sticky that hot August day? Ever notice how it runs down combs and accumulates along the bottom edge? Bees are not always directly to blame for the thick gummed-up bottoms of combs. Don't blame everything on them. Sometimes you do not give them enough entrance. Why do you persist in ignoring Dr. Miller's good advice?

"Hello! Are you the bee inspector? Say, sorry to have 'phoned you so late (woke me from my sound beauty sleep), but what does foul brood smell like?"

"It has three kinds of smells—that is, there are three kinds of foul brood with three different smells—one smell for each kind. One smell is real rotten; the next is almost as rotten, and the third is only sour; and this is not foul brood, only pickled. Some folks don't agree as to how rotten the smell should be to be really truly foul, and the descriptions of the strength of the smell vary all the way from that of a bad cigar to that of an egg which explodes when you shake it close to your ear. You remember that, of course. How does yours smell?"

"Pretty much like sour swill. The yard is full of the smell, and it's just pouring out

of every hive. Had I better burn them right up?"

"My friend, that is the odor of new goldenrod honey. You just let that smell keep pouring out. Congratulate yourself that things are as they are. At the present rate the bees will not only pack things solid for winter, but give a surplus as well. No, the honey will not smell like that when it is ripe. Good night."

I have that lesson by heart now, for about two or three times a day or night I get the question. And here is one for you. How do you suppose the bees can gather such smelling stuff and keep it down, even for a time?

DIFFERENT RESULTS FROM APIARIES CLOSE TOGETHER.

Item—sixty colonies of hybrid bees on a gently sloping hillside—a Rhode Island hill if you please, where the highest mountain is only about eight hundred feet. Twenty of said colonies were moved half a mile, as the crow flies, southeast, over the crest of that hill which was exactly one hundred feet above the first apiary. Forty feet below the crest of the hill, on the side opposite the first apiary, the twenty colonies were placed. That happened in the spring of 1915. The forty colonies stored not a pound of white nor even light honey, or leastwise all they got was submerged in dark bitter honey-dew from scrub oak. The twenty-colony yard put up a big crop of the very best light honey and not a drop of honey-dew to be found in it. And they put up more pounds per colony than the other yard. Does memory serve me right, that some one or two or three or more have said that apiaries should be at least three miles apart?

Another item: Two apiaries of pure Italians, all of the same breeding, are on a ridge—just a little Rhode Island hump—the yards being less than a quarter-mile apart—one on the crest of the ridge, one about thirty feet below the crest on the east slope. One yard gave a fine crop of fairly light-amber honey while the other put up a lesser crop of darker honey.

Will some one (say from near Marengo) tell us how to pick a "location" and define what "location" means?

How do you pick up workers for filling queen-cages? Most persons reach for a bee with its head in a cell, and with thumb on one side of the bee and forefinger on the other, "pinch" at the wings. A bland and amiable gentleman commonly called "Charlie," living not a thousand miles from

Johnstown, N. Y., most painstakingly showed me how *he* did it. Makes a grab for any bee that is hiking across the comb, and, with forefinger down and thumb up, sends the finger straight after the bee, hits *ends* of wings which slide up on to the forefinger; thumb at same time shuts down on them, and the trick is done. Very swift and neat as he did it. Tried it myself lately. Finger went too low. Now I have a suspicion that some things one has shown to him had better not be meddled with. It's more than a suspicion—it's a conviction.

AT THE SHOW.

A lot of single-comb observatory hives, some of the well-known commercial type, some of the new type having the ventilation wholly along the bottom of each side. In the former the bees were uneasy and racing about, while in the latter they were quiet and attending to household duties in a perfectly normal manner. And, by the way, do you know that it is a fine art, putting up a nucleus for exhibition? The color of the comb, the color of the bees, and the color of the hive must all be considered. If the hive is dark in finish the comb should be light and bees dark. If hive is light in color, a dark comb and light bees fit. Then one must not have too many old bees nor too many bees of any one age. The quantity of bees must be sufficient to keep the brood warm and yet not crowd things; and in this connection the two panes of glass on each side and ventilation only at the bottom help immensely. If you are to follow the shows next year, just take time this winter to study hive colors and comb colors. He who does it best will stand the best chance of winning.

Another "show" item. Exhibition of queens is more often than otherwise a disappointment to the visitors. In a nucleus the queens are hard to find except by the experienced. When in cages the light is poor and the queen is often hidden under the bees. Queens show best in a special cage about four inches square. The front is glass, ventilation is a small opening near one lower corner, and is wire-screened; glass is only one bee-space from back of cage, and candy food is in the bottom of cage. Thus arranged the queen cannot hide. Hang such cages up like pictures and you have a queen exhibit that is worth while.

When showing queen-cells, arrange the display so the bees cannot completely hide

them by clustering in front of them. Glass on one side only; and that close to the cells with plenty of room behind the cells works nicely if two panes of glass are used with a confined air-space between. There is a knack in getting cells built for show purposes, as you will discover if you try. And you will also discover that making a comprehensive exhibit of queens and queen-cells is an art by itself quite different from other branches of bee culture.

"Don't touch," said the sign; but the finger-prints in the surfaces of the comb honey told a woeful story of the illiteracy of the spectators. I wish the public would learn to read. The managers of some of the shows furnish glass cases for honey and similar exhibits; at others the exhibitors must do so or take their chances. The premiums as a rule do not warrant the risk in showing, to say nothing of the expense, unless one may sell at their exhibit or near it. Wonder if the beekeepers' societies cannot consider these things and take them up with the show managers. They can accomplish more than individuals. I think it is worth considering, and I believe that, if rightly handled, the exhibitions can be made a much greater influence in spreading the use of honey. Some of you "know-hows," please get busy.

Varying with your point of view it is "strange," "interesting," or "funny" what different things arrest the attention of different persons. There was a display of combs arranged to show the difference between the profitable and unprofitable kinds, and also an old black comb with "wax-worms" at work in it, and a few of the moths (dead) pinned to it. It was all a good instructive exhibit, and was fully labeled so he who ran could read. That bunch of worms caused more talk than all else. Poor morbid humanity! But it did stop people, and gave the desired opportunity for talking bees and good beekeeping. And, mind you, there was no honey shown anywhere near that exhibit. Worms and honey is not a combination that it is well for the public to associate.

I saw an excellent exhibit of hives and appliances at a county fair. Every part of the hive was labeled after this manner: "Model hive, simple, efficient, reasonable price." "This size entrance is best for warm part of the year." "Queen-excluding honey-board for keeping queen out of the surplus-honey chambers. Always to be used

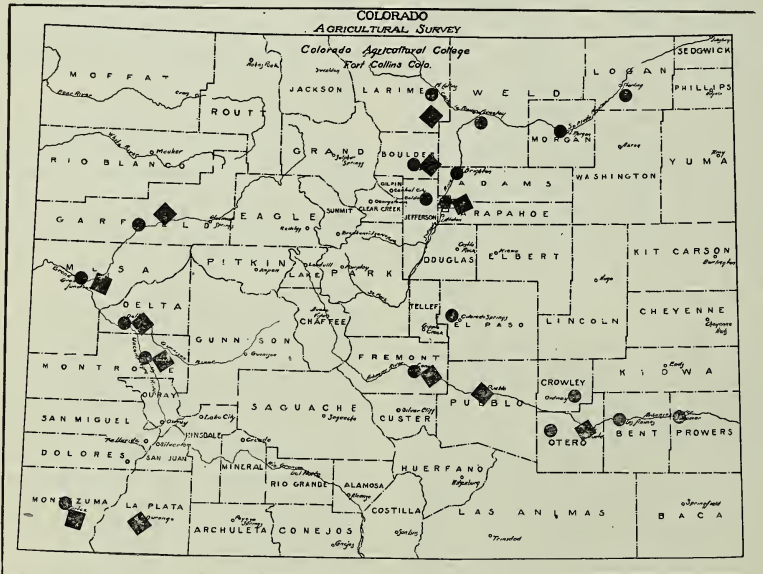
this side up." And thus all thru. It was a liberal education to the inexperienced and farmer beekeepers.

You may be interested to know that it was an exhibit by the educational section of a state body. The supply men may rise to the occasion some time—perhaps when they have a smaller variety of hives and things.

Mr. Chadwick, in the August 15th issue for last year, expressed doubt as to bees making but ten trips a day. Then he proceeds to cite the great activity of bees working on a bait. I wrote to him, calling attention to the fact that bees robbing—working on "bait"—were not working normally as we all know. He replied by referring to their activity during a heavy honey-flow. I will admit that sometimes a secretion of nectar may be so great as to cause bees to be unduly industrious; but I will at the same time repeat that bees *average* but ten trips a day. This estimate of their labors was arrived at independently by several observers in this country, and by at least one

abroad. To this statement Mr. Chadwick replies that it is not possible to mark a bee so that said marking will not interfere with its normal actions. Unfortunately for him the facts contradict his belief. A little suitable color can be put on the thorax so that the bee does not even notice its application. He may reply that, even so, it does have its effect on the bee. This was taken into consideration long ago, and was proved to be without basis by comparing the actions and trips of bees thus marked with those of bees of special colors in colonies of a different color, as goldens among blacks, etc. Beliefs, suppositions, and prejudices go down before facts. But the gist of the whole matter is this: Bees are not making as many trips as the whirl and confusion before a hive suggests, and are not as busy as legends have it, whether their daily average be ten or twenty trips, so it behooves us to have as many bees as possible in each colony—a condition which will be furthered by good combs and prolific queens producing vigorous, long-lived bees.

Distribution of Bee Inspection in Colorado



The squares indicate horticultural inspectors; the circles, bee inspectors.

By statutory provision, 1909, the Professor of Entomology of the college is State Entomologist charged with the horticultural and bee inspection of the state. He is assisted by deputy horticultural inspectors in thirteen counties, and a deputy who is state bee inspector with deputies in 19 counties.

In addition to their regulatory duties, these men give a good deal of their time to spraying demonstrations in fruit districts of the state, and lectures, printed matter, and personal visits to the fruit-growers.—*From the Colorado Agricultural College Series 15, No. 8.*

NOTES FROM GERMANY

Is a Non-swarming Strain of Bees Desirable?

BY J. A. HEBERLE, B. S.

Of late a number of articles have appeared relative to the question of breeding up by selection of a non-swarming strain of bees. Rev. F. Gerstung, one of the foremost beekeepers in Germany, started the discussion with an article in the *Deutsche Bienenzucht*, of which he is the editor. The following is a translation of the article, abridged. The reader must bear in mind that the writer had in mind only conditions prevailing in Germany.

Is the swarming impulse a quality or property that is by heredity transmitted to the offspring? Gerstung says it cannot be. He considers it impossible to breed up a strain of non-swarming bees, and holds that all endeavors in that direction will prove a failure.

He says, for argument's sake, let us suppose we could eliminate the swarming impulse—what would be the result? The strongest impulse, the propagation of the race, upon which the healthy development and the continuation of the race depends, would be weakened; the bees would become degenerate, and slowly, yet surely, would go toward extinction.

For comparison he writes, let us take the same aim for a breeder of domestic animals—say, for instance, the breeder of hogs in order to get a race that would readily take on fat, the impulse for propagation should be eliminated. The absurdity is at once obvious. But is not the elimination of the swarming impulse the same? That the propagation by non-swarming bees may be effected artificially does not affect the case, since after the elimination of the swarming impulse, degeneracy remains.

With bees the case differs in so far that the supposed elimination of the swarming impulse by select breeding is a delusion. The swarming impulse or the lack of it is not a quality or peculiar characteristic that may by inheritance be transmitted to the offspring.

PROOF OF THE FOREGOING ASSERTION.

Is the swarming impulse a quality of the single bee—the queen or of the colony—just as are size, color, or the sexual organs? Surely not. It is generally known that good honey years are poor swarm years, and *vice versa*. This means that swarming is not a quality or fixed trait of the bees, but a natural consequence of the surrounding weather and flora. In other words, the same colony which showed no swarming

impulse in 1911 may in 1912 swarm excessively. This is not a supposition, but a fact. We (Gerstung) called attention to this in the swarm year 1912, in which all the colonies swarmed, including those that had been bred as non-swarmlers.

Notwithstanding this convincing proof, the teaching that the swarming impulse could, by select breeding, be eliminated, was continued, tho it had been conclusively proven that the surrounding conditions stimulate or subdue the swarming impulse.

WHAT STARTS OR STIMULATES SWARMING?

A rich pollen pasture in spring with a moist warm temperature causes a rapid expansion of the brood-nest. The queen finally cannot increase the egg-laying any further, and the young nurse-bees lack opportunity to dispose of their chyle (Futtersaft); this causes a certain physiological tension which leads the young bees by supplying working larvæ with royal food to raise queens that may furnish more eggs—i. e., young larvæ to find use for the chyle—to satisfy the breeding instinct of the bees. As soon as this development has reached this stage the swarming impulse is awakened. If this height of development under different and less favorable conditions is not reached, the swarming impulse is not developed—does not manifest itself.

This may be proven by experiment. If, at the height of the development, we remove the queen, the process which leads to swarming is artificially started. The queenless bees rear for themselves queens. The first queen that is hatched swarms out with her followers. It follows that swarming is the result of favorable conditions of weather and pasture, but is not a quality or trait of the bees or queens which might be transmitted to offspring.

Notwithstanding this, the swarming impulse is treated exactly as the yellow bands of the Italians or the ill temper of the Cyprians. They (certain beekeepers) select and operate with this imaginary quality as if it were a trait that the offspring may inherit from the parent. They do this, altho swarm years from time to time show conclusively that they pursued a phantom.

NON-SWARMING BEES; APPARENT SUCCESS.

How is it that some beekeepers claim they have been successful in breeding a non-swarmling strain? Gerstung believes that, on account of too much skill in rearing the

queens, and especially on account of the baby nucleus in which the queens must await the awakening of the sexual instinct and the mating, might cause inferior or less fertile queens. Colonies with such queens do not reach the height of development which must precede the swarming impulse. This is degeneration of the worst kind—not successful breeding. Our queen-breeding methods are moving on a declining plane. We glory in methods that have succeeded in producing a non-swarming strain while we have produced only a degenerate strain—this strain which, by their not coming out to swarm, show that nature has condemned them to extinction, and this is today considered an achievement of modern beekeeping! Beekeepers, go back to nature.

IS THE SWARMING IMPULSE REALLY AN IMPEDIMENT TO SUCCESS?

Gerstung says, only for a bungler (Ger-

man condition). Swarming is the summit in the development in brood-rearing on which, aside from the honey-flow, all success depends. It is the brood which furnishes the workers who at the right time are to gather the crop.

The better one understands how to guide the development, the brood-rearing, to further his own ends, the greater the success.

When we (Gerstung) at the height of the development receive a swarm of 6 to 7 lbs., we consider this an extra addition to the crop. We are glad when our colonies, after having made the most of the honey-flow, give large heavy swarms. We know the swarming colony is rejuvenated, and we have a good productive colony more for the next year's crop. As a matter of course, the beekeeper must understand how to keep the control of the development in his hands.

Kempton, Bavaria, Germany.

THINKING IT OVER

BY GRACE ALLEN

A beekeeper sat by an open hive—
On hill beyond hill how the day was alive!

“He sorta sneered, that store clerk did,
In town the other day,
When I spoke up proud about my bees.
What made 'im do that-a-way?

I aint slicked up when I work, that's true,—
He's allus slicked up, hisself.
But I wouldn't swap this I-talian queen
For all the duds on his shelf.

It's pants 'n coats 'n shirts all day,
A-trying to make folks buy,
'N me with my bees in the orchard here
A-watchin the rascals fly.

Shet up in a store where he caint well breathe,
With crowds 'n noises 'round,
'N me in the sun—with the hills like this—
'N the bees the only sound.

He sorta sneered, he sorta sneered—
What made 'im do that-a-way?
Law me, I reckon he never see
A day like this ere day!

It's suns 'n hills 'n sechlike things,
'N thinkin a bit, by gum,
That keeps a man frum sneerin at folks
'N jes makes 'im wish he could hum!”

The beekeeper smiled as he closed the hive.
On hill beyond hill—how the day was alive!

Heads of Grain From Different Fields



THE BACKLOT BUZZER.

BY J. H. DONAHEY

When the other fellow tells somebody who tells you about robbing a bee-tree the story goes that they get about a wagon load of honey, but when you do it yourself you're ashamed to say that you got more than a barrel or two—they might not believe you.

The Second Tri-State Field Meet.

The second field meeting of the beekeepers of Illinois, Wisconsin, and Iowa was held in Union Park, Dubuque, Iowa, August 1 and 2. The meeting was called to order by Mr. E. J. Baxter, of Nauvoo, Ills., the president of the Illinois Beekeepers' Association. The excursion and luncheon given by the Commercial Club of Dubuque on the steamer Sidney was greatly enjoyed by all present.

The attendance was about ninety. The beekeepers were honored by the presence of C. H. Boccock, expert in apiculture of the British Beekeepers' Association; Dr. Phillips, from Washington; also inspectors France, of Wisconsin; Kildow, of Illinois; Blaker, of Minnesota; Pyles, of Illinois, and Elmore, of Iowa. Prof. Jager and his assistant, Mr. France, were also present from the Agricultural College of Minnesota.

The question-box was in charge of Mr. Kildow, of Illinois, and a goodly number of questions of vital interest were discussed, such as weight of sections, prices of honey, differentiation of American and European foul brood, etc.

Mr. Boccock gave a very interesting talk on the Isle of Wight disease. He told of the

spread of the scourge over the British Isles, and of the great destruction of bees in that country. He is not sure that any cases of this disease have been found in the United States.

A motion was passed providing for a committee made up of one member appointed from each state to bring before the Interstate Commerce Commission the urgent need of the same freight rate on comb honey in the western as in the eastern states.

Another motion was passed to continue the organization, but change the name to the Mississippi Valley Beekeepers' Association. There will be another meeting again next year some time during the first part of August. The committee selected to make arrangements for the next meeting is as follows: Mr. France, Wisconsin; Prof. Jager, Minnesota; Mr. Kildow, Illinois; Mr. Miller, Iowa.
J. W. Stine, Sec.

Packed Snugly in Pine Needles.

I have tried almost every thing recommended for use in packing. Some of the materials are good, others medium. I have finally come to the conclusion, after several years of experience, that white-pine needles make the most ideal packing.

Those who live close to woodland, where the stately white pine may grow, may have noticed that, after a rain or snow, when other litter on the ground is damp, the bed of these dead pine needles, sometimes quite thick, is nearly always dry and warm to the touch. This was the reason I was induced to try it years ago; and as an absorbent of moisture and retainer of heat it is far superior to any other packing material that I have ever used.

For want of a better arrangement I take two lath the length of a super inside, and tack three or four lath on these crosswise, cut the width of the super. I then place this rack on the frames; then fill a burlap sack with packing and place it over all. As spring approaches I take one part of the packing out; and when all danger of cold that might chill brood is over I remove the sack.

Enid, Pa.

John R. Lockard.

Just One Good Way to Get Rid of Them.

Have had the worst time in years with yellowjackets. Five weak colonies have been wiped out. I am trapping yellowjackets at the rate of about a pint a day. This has been going on for four weeks, and I begin to see a decrease. Another season I shall have more traps and earlier setting, and I hope this will give better control.

Replying to "Subscriber," page 746, Aug. 15, use a wire-screen fly-trap baited with fish heads or any fresh meat.

San Jose.

Another Subscriber.

Queens Whose Colonies are Weak in the Fall Not Worth Saving.

That we had no loss last winter may be attributed to our belief in fall uniting. Not a fall passes that we do not have colonies lacking, both in stores and strength, to winter perfectly otherwise.

So much regarding the poor wintering qualities of goldens has been said in "Gleanings" that we were somewhat surprised to find our yellowest stock surpassing all last spring. While we have had a few yellow colonies winter poorly, the cause, more probably, was from the queens having gone thru shipment than from degeneracy.

Within recent years we have done practically no feeding. Tho not always, colonies short of stores in fall are quite generally deficient also in other respects, and not up to standard. The queens of such colonies should not be kept, but removed in uniting. Tho it is true that open winters call for an increased amount of winter stores, the rule applies only to a given locality. While in the north from 25 to 30 lbs. is necessary, half that amount will run a colony thru our short winters.

Each winter we have a few days of snow and ice, but not to such an extent as to demand other protection than is afforded by the single-walled hive. For mutual protection, however, against raw winds our hives are crowded into a long compact row. Separation will become advisable only when young queens begin mating, and the row will be scattered widely in forming increase and nuclei.

Ft. Smith, Ark.

Lee Ellis Kerr.

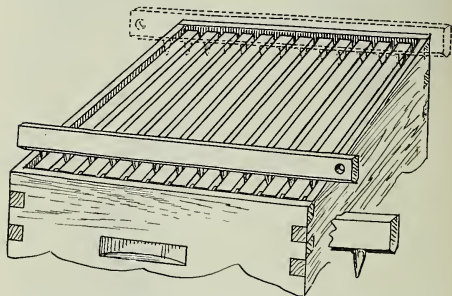
A Frame-spacing Tool.

I have been much interested in the articles which have appeared from time to time regarding the merits of self-spacing frames. While the Hoffman frame seems to be the established favorite, yet there are many, like myself, who prefer the plain old-fashioned $\frac{7}{8}$ frame, firstly, because any one of them can be easily removed from the hive by pressing over its immediate neighbors slightly; secondly, there are no awkward projections in the way at extracting time; and, lastly, they are easily and cheaply made at home by any one who possesses a saw-table and a small circular saw.

As to the rabbit-spacing plan, the bees of this locality are so liberal in their use of propolis that I have never considered that as very practicable.

I have a little device which I have used in my own apiary for six or seven years with much satisfaction, and which is neither of the hive nor of the frame. My hives contain 12 Langstroth frames, $\frac{7}{8}$ x $\frac{7}{8}$ top-bar. The rabbits are plain wood, with bee space below the frames. The hives are 18 inches wide inside—that is, permitting $1\frac{1}{2}$ -inch spacing. One will infer from this that in my early beekeeping days I read "Langstroth on the Honeybee," and was an ardent disciple of Dadant.

I have a spacing device that I have used with much satisfaction for spacing the frames. I take two pieces of spruce or other light tough wood, $\frac{3}{8}$ x 2 x 19 inches, and bevel off one edge of each piece. Then between the two I insert 13 pieces of the same



wood, $\frac{3}{8}$ x $\frac{1}{2}$ x 4, as teeth, leaving space between to slip loosely over a top-bar. The projecting part of the teeth are rounded off and tapered to a blunt point. After examining a hive and replacing the frames I take this spacer from my wheelbarrow (which I use almost continuously in my apiary work), and by pressing it down at each end of the frames they are all spaced exactly. By having the edges beveled, and using a puff of smoke, it is seldom that a bee is crushed.

Fred E. Smith.

Craigvale, Ont., Can., April 24.

What is a Stand of Bees Worth?

To one who keeps bees this is a question that is frequently asked, and is probably the most difficult to answer correctly. To those who know nothing about bees it appears that they ought to sell at a standard market price, the same as corn or wheat; but, instead, bees sell more like skilled labor, according to their ability to deliver the goods.

I have seen colonies that could not be bought for \$15 at the beginning of the honey-flow, and others that stood alongside of them that would not sell for the price of the new hive they were put in only two seasons before.

If a man should walk out to my yard and point out a single hive and ask what it is worth I could give the questioner a fairly intelligent answer; for, knowing the condition of the interior of each hive in the yard, I would be prepared to make a fairly correct answer. To show some of the possibilities I will show what I have done this season. Last spring I had six colonies which I wintered thru in good condition. Each colony had a young Italian queen which had been introduced as soon as the honey-flow stopped in the fall of 1915. I bought queens this spring as soon as I could secure them from the South, and divided until I had 18 stands. These went along until the swarming season opened up. I caught two stray early swarms, making 20.

I held the bees under control till the first of July. By cutting queen-cells, six of the

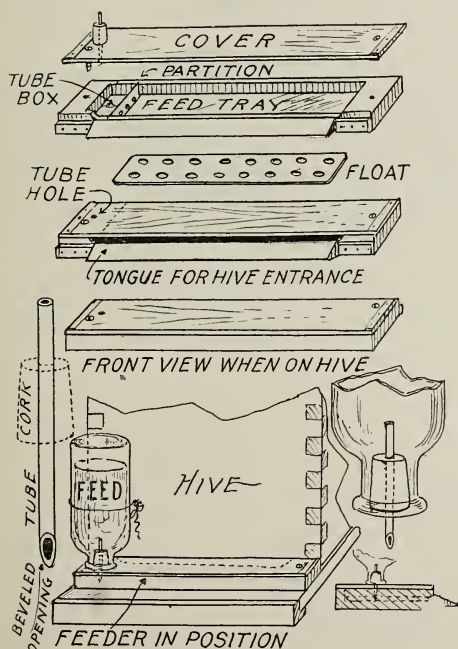
colonies became so strong I thought it better to make a little more increase, so I let the six swarm, making a total of 26. Out of this number 20 colonies produced surplus honey, some of them filling six and even seven 24-section supers, while others filled but one or two. Up to date I have taken 72 twenty-four-section supers from the 20 colonies, or from a spring count of six colonies. This honey is bringing me an average of \$3.25 per case, making a total of \$234 for a honey crop from a spring count of six colonies, or \$39 per colony.

Hiawatha, Kan.

J. W. Admire.

A New Type of Bottle Feeder.

I am sending a sample of my bee-feeder. One of the features of this feeder is that it can be closed up without in any way disturbing the bees. In the second place, one can see whether the bees have eaten all their feed or not. Third, the bees have room enough to take the feed away fast. Fourth, it keeps the bees warm during late feeding in autumn. Fifth, from the very least quantity up to two quarts can be fed, as one can use a bottle on both sides; but still one bottle will generally suffice. Sixth, when feeding no smearing results, and, consequently, no robbing takes place.



After the feeder has been applied to the hive-entrance I fill one of the bottles with feed, put the cork with the little tube (the latter may be made of aluminum) in the bottle, and hold my finger on the slanting slit of the tube. I then draw the bottle toward me, and let the tube go into the feeder thru the little hole. As the little tube

goes into the small hole I withdraw the restraining finger. By driving two small nails in the hive, the bottle can be bound to the hive with string. The tube must rest on the bottom of the feeder. As the bees take the feed away it flows continually out of the bottle.

Grand Ridge, Ill.

Joseph Garré.

[Mr. Garré's feeder-block is long enough to close completely the entrance. Except in cold weather we believe it would be better to have it a little shorter so as to provide a small entrance.—Ed.]

Paper Division-boards for Introducing Queens and Uniting.

The following plan for introducing has proven successful. Remove the old queen and three frames of broodless combs. Replace with a three-frame nucleus and queen, putting it on one side of the hive. Next put in a division-board between the nucleus and the rest of the colony, made as follows: Take a thin board the size of the inside of the hive, having most of the center sawed out, and a sheet of newspaper pasted over the opening. Next lay a sheet of paper over the three frames. Put a screen over entrance in front of the three frames. Make all other spaces bee-tight, i. e., space over rabbets and space by the entrance between the screen and division-board. That is all.

I use a two to three frame nucleus in a ten-frame Langstroth hive, with division-board between for mating. If desiring increase, after removing one nucleus and queen I replace with three or four frames of brood and the old queen that is being replaced by a newly mated queen, using a solid division-board temporarily. Later, after both sides are well filled, replace the solid division-board with one having a paper center, after killing the old queen.

I use a combination feeding super-cover and bee-escape board which I think is handy. It is an ordinary bee-escape board with a hole sawed in to receive a 10-pound pail to be used as what is called a pepper-box feeder. After feeding in the fall I tack a screen over the hole to give upward ventilation. If no ventilation is wanted I place a thin board or enameled cloth over the screen. The screen has a small hole to receive a Porter bee-escape when used as an escape-board. Heretofore I have had trouble in losing chilled bees when transferring lids or feeders in cool weather. This lid is put on early, and the bees can be fed very late in fall, and none lost when pail is removed. In the spring, after brood-rearing starts, I discontinue upward ventilation by covering the screen.

When using the paper division-board don't change frames after bees appear to be united. By putting the queen and her three frames in the center, after the paper had been removed by bees I lost a queen. One colony built cells on the other side of the hive, in which the combs had not been

moved. These bees previously had been superseding an old queen. I destroyed the cells and no more appeared.

St. Louis, Mo.

J. H. Fisbeck.

Pollen on Shoulders from Snap-dragon.

On page 727, Aug. 15, Mr. Lovell mentions a peculiar deposit of yellow pollen which he observed upon the shoulders of his bees, and asks an explanation. During the season of 1914 there was a great abundance of blossoms on the plant known to me as snap-dragon, growing on wet, springy ground which had been cleared of birches and willows the autumn before. The blossoms are lemon yellow, a sort of deformed cornucopia shape, and large enough to admit a bee out of sight unless looked for. The bees enter these blossoms and remain two or three seconds, meanwhile moving more or less. When the bee emerges there is some pollen on its shoulders, and each flower entered adds to the deposit. There are no snap-dragon blossoms this season, and no such pollen-marks on the bees.

Some time ago I visited a beekeeping friend forty miles away, and he had noticed this yellow mark on some of his bees. I suggested snap-dragon, and a short search discovered some blossoms and bees working on them, with pollen on their shoulders.

I take it the deposit is entirely incidental. In looking into the hives many bees so marked were seen, but there did not appear to be any attempt by the bee or bees to remove it.

Hoboken, N. J.

C. D. Cheney.

Italianizing a Locality by Supplying Queens for 25c.

I believe a lot of good can come to the beekeeping industry if we will all do a little work in trying to bring to those who keep bees some helps on "preparedness." This is what we are doing when we get our neighbors to take the bee-journals and join one of the beekeepers' associations. The beekeeper needs just as much to be prepared as the farmer, the merchant, or any of the trades, if he is to be successful.

The way I go about getting people interested in bees is very simple. Any one can do it. I made this threefold combination offer in getting my names. Gleanings 6 months, membership in the State Beekeepers' Association, one tested Golden Italian queen, all for one dollar. Association membership is 50 cents; this leaves me 25 cts. for the queen. Some will say that one cannot possibly raise queens for 25 cts. I know this is true; but there is another motive in letting my neighbors have these queens, even tho I might give them away. I am helping to get all the people in my locality to raising Italian bees, and it is thus easier to keep my own bees pure. Every beekeeper in town, and within a radius of three miles, has given me his name and money for this combination

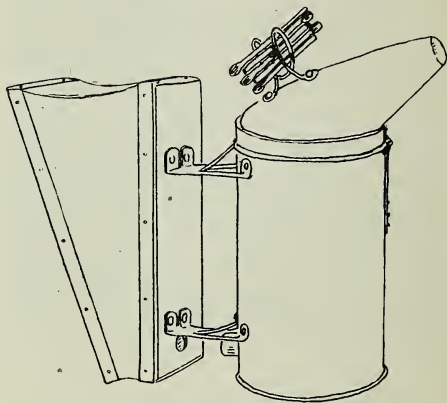
offer. I expect to raise a few young queens at one of my out-apiaries for my own use in replacing the queens taken from those colonies which are preparing to swarm in filling these orders for queens.

Stockport, Ia.

J. W. Stine.

Can You Match This?

Altho I am just a beginner in bee culture I have found that matches are not always handy when I am ready to light up the smoker. On the top of the smoker is a coiled-wire handle for opening the cap. The



space between the two coils is a trifle less than the diameter of a match. Four or five matches may be held, between the wires, and these are usually enough for a day's work. If more than one match is held, heads should be alternated.

Medina, Ohio.

Wesley Manville.

Does Sound Pretty Convincing

I was interested in reading the third item by J. E. Crane, page 714, Aug. 15, referring to the better pollination of fruit trees nearest the bees.

About 50 feet west of my small apiary is a King apple-tree. Last year this tree bore quite heavily on all sides; but it was quite noticeable that the yield was the heaviest on the east side, toward the bees. This year practically all the fruit is on that side of the tree.

Madison, Conn.

F. C. Dowd.

Can bees be kept in the attic of a house? Moline, Ill., July 6.

B. A. King.

[Bees can be kept in the garret, providing sufficient ventilation can be given to prevent combs from melting down. It is usual to put the hives near an opening in the side of the building where the direct sunlight from the windows may not strike them. It would be advisable during the hottest part of the year to have one or more windows open in the garret so that it does not get too hot for the bees.—Ed.]

A. I. Root

OUR HOMES

Editor

For God so loved the world.—JOHN 3:16.
 Thy kingdom come; thy will be done on earth as
 it is in heaven.—MATT. 6:10.

Please notice, friends, the word *world*, "for God so loved the world." It does not read that God so loved the United States, nor England nor Germany, nor any other nation. It is the whole wide world. It is not the American nor European nor German, nor the negroes of Africa. God so loved us all, and sent his only Son to save us all. If that only Son has not yet been presented to every land and every nation, we, his followers, are more or less responsible.

Once more, that wonderful prayer the Master gave us is that God's kingdom may come on *earth*—this whole planet of ours. God is not only no respecter of *persons*, but he is no respecter of *nations*. I confess I did not think of this until quite recently. In *Our Homes* for Aug. 15, under the head of "True and False Patriotism," I said "Love of one's country may not only be a mistake but an instigation of the devil." After I put it in print my conscience troubled me somewhat. I feared I was putting it too severely. Let me now talk about something else, for just a moment, before we get back to "patriotism."

Years ago, when I was new in the Christian work, we had a beloved pastor. He was young, like myself; but I was so much in sympathy with all he was trying to do that I never missed a word from him in the pulpit, prayer-meeting, teachers' meeting, nor any other gathering. He was a man of wonderful talent and ability, together with a bright cheerful outlook in regard to the work of spreading the gospel. Well, among many other kind words I hold in my hand a letter (just received) from him, which reads as follows:

My dear Friend:—Almost a lifetime has passed since you and I shook hands for the first time, and I came among you in Medina as the immature pastor of your splendid church. I remember, with increasing gratitude and gratification, those dear old days in Medina, and you, my dear friend Mr. Root, were always cordial and appreciative of your pastor, co-operative in every good word and work, and a stimulus and comfort to him. A good many of the people that I knew there have passed away. I often think of you and your home, and all the friends who made my years of service there bright and fairly radiant.

GLEANINGS comes to me regularly, and I enjoy it very much. The copy for Aug. 1 reached my desk yesterday, and I turned to the pages of "Our Homes." The tribute to Mr. Ford is impressive, and I think he is worthy of it. It is a mighty good thing to get a little of the phrase as well as the sentiment of the Scriptures in a periodical.

Please remember me to any friends who may not have forgotten me, and believe me now and always,
 Most sincerely yours,
 New York City, Aug. 5. C. J. RYDER.

One thing that pleased me about the letter was that he appears to indorse what I said about the possibility of Ford being a Christian, *without knowing it*. Now, if you please, let us go back to that matter about true and false patriotism. With the letter I speak of came a little pamphlet, and I am going to make some clippings from it because it so strongly indorses what I said about patriotism. Below are the clippings:

THE WORLD PROBLEMS OF THE A. M. A.

Secretarial Paper by CHARLES J. RYDER, Sec.

Certain forces which we have thought strong and adequate have proved inefficient in the last few months. Let us note these briefly.

Patriotism has proved a painfully inadequate element in the redemption of humanity. We look across the seas and witness the horrible slaughter and the great crime of the centuries being perpetrated. And yet each nation of either group appeals to patriotic enthusiasm as an adequate motive for these crimes. Patriotism as a motive power for the uplift of humanity is failing wretchedly and miserably.

But in the same terrible conflict science has proved disappointing. Instead of devising means solely for the alleviation of human suffering, science has largely surrendered herself to the production of destructive machinery; of explosive gases; of self-igniting fire, to the disgrace of the name of science and to the horrible murder of human beings. Science has failed. Neither the American Missionary Association nor any other great movement can depend upon science for its impulses of uplift.

Again, secular education has failed. It is impossible to read the utterances of famous university professors in their disgraceful defense of the horrible cruelties and barbarisms without admitting that secular education has failed as a force in the redemption of humanity.

It is a question whether organized Christianity is not failing. Now, if we analyze carefully we discover that the real reason why these forces fail of beneficent results is because they have had no larger purpose than the advancement of their own power and advantage. The patriotism of the European countries that are plunged in war has been a selfish patriotism, a patriotism that sought the aggrandizement of its own nation—not the benefit of the world—but to crush other nations and enlarge its own domain. Education has been used to suppress rather than promote the interests of all humanity. Artificial barriers have been put up around investigation and discovery and research so that the advantages of educational results might be enjoyed only by a single group or nation.

Even organized Christianity represented by the churches has often drawn the lines of demarcation and sought narrow and selfish advantage. Prof. John Briery emphasizes this fact in the following:

"And yet the world's greatest spirits have figured often enough as opponents of human law! Again and again we see them setting the might of their personality against a whole system of regulations, of customs, of authorities. Socrates attacks the Athenian orthodoxy and drinks the hemlock; Jesus puts his 'I say unto you' against the old religion, and is condemned by the church authorities; Lu-

ther, with his 'Here stand I; I can no other,' fronts the whole might of the empire and of the hierarchy; Bunyan breaks the Conventicle Act and find himself in Bedford gaol; Wesley, contrary to episcopal authority, takes to field preaching, and is cast out of the Establishment. Here, you may say, is disobedience, here is defiance of the established order; here is a tremendous self-assertion, a pitting of the single ego against the whole system held as authoritative and sacred.

And why has patriotism proved so inadequate? The reason is not difficult to find as hinted above. Germany has sought her own advantage, and patriotism has simply meant to her and to her citizens the development of her own life and the enlargement of her own opportunities, with no purpose to contribute to the advantage of other nations—the greed of commercialism rather than a generous purpose to divide. And the same has been true of the other contending nations to a great extent. When it comes to an armed conflict the selfish view of national relationships is the dominant view of the so-called patriot. They strive to crush and exterminate rather than to bless and elevate. If the United States presents no larger conception of national duty than that which we see across the ocean, patriotism will fail here as it has failed there. And it ought to fail. The real test is the value to the world and not the advantage to a single national group. We are bound to cultivate and promote this conception of patriotism. Nothing short of this can meet the demands of the world's progress.

In view of the above, I have been wondering if our Fourth of July were not in some respects, especially the way in which we have been celebrating it, a mistake. I do not know whether at this present time England sympathizes with our Fourth of July or not; and I do not know whether any nation besides the United States recognizes the Fourth of July. While considering the matter it rejoices my heart to recognize that the use of firecrackers and toy pistols and cannon has been for the last few years largely done away with.* *Christmas* is a *world-wide* anniversary. All nations can unite in celebrating the birth of our Lord and Savior; and would it not be well if, at this present stage of affairs, we should choose *holidays* that *all the world* can unite on in celebrating? Down in Florida they have a fashion of having their fireworks and things of that sort on Christmas as well as on the 4th of July; but as I have not been in Florida in July I cannot speak from experience.

Right here let me give you a little tract that was sent me by some good brother. It seems to me it points out the outcome of all our trouble, and points to the glad time when God's kingdom shall have come, and his will be done on earth as it is in heaven. I have read it over and over, and every time I read it it gives me a thrill. Here it is. Now see if it does not give you a glimpse of the glad time coming:

* A grandfather, a neighbor of ours in Florida, made each of two boys a Christmas present (?) of a little gun. Shortly after, while shooting fish, one accidentally shot the other, killing him instantly.

OTHERS.

Lord, let me live from day to day
In such a self-forgetful way
That, even when I kneel to pray,
My prayer may be for *others*.

Help me, in all the work I do,
To ever be sincere and true,
And know that all I do for you
Must needs be done for *others*.

Let self be crucified and slain,
And buried deep, and all in vain
May efforts be to rise again
Unless to live for *others*.

And when on earth my work is done,
And my new work in heaven begun,
Let me forget the crown I've won
While thinking still of *others*.

Others, Lord! yes, *others*,
And none of self for me;
Help me to live for *others*,
That I may live for thee!

All that is necessary to make the above apply to patriotism instead of individuals is to substitute "our country" in place of the word "me." Is it not likely that we as a people, say here in the United States, have been praying too much for our own nation and too little for other nations? God knows our nation just now is in sad need of the prayers of Christians; but is it not possible that our nation would be raised up and helped by praying for *other* nations as well, instead of ourselves only, or for our own United States?

The third verse takes hold of me particularly:

Let self be crucified and slain,
And buried deep, and all in vain
May efforts be to rise again
Unless to live for *others*.

May the great Father above bless the message of this Home paper.

~~~~~  
"WHAT HAVE WE TO GAIN BY HURTING ONE  
ANOTHER STILL FURTHER?"

We clip the following from the *Christian Herald*; and, if I am correct, they take it from *Collier's Weekly*:

What have we been fighting for? What are we fighting for? Do you know? Does any one know? Why am I spending what is left of my substance, and you what is left of yours, to keep on this war against each other? What have we to gain from hurting one another still further? Why should we be puppets any longer in the hands of crowned fools and witless diplomats, even if we were dumb and acquiescent before? Does not the blood of our sons now cry out to us that this foolery should cease? We have let these people send our sons to death.

It is you and I who must stop these wars, these massacres of boys. Massacres of boys! That indeed is the essence of modern war, the killing off of the young. It is the destruction of the human inheritance; it is the spending of all the life and material of the future upon present-day hate and greed.



I think the above hits it pretty well. Modern warfare is the business of killing off our brightest and best young men, and that, too, right in the prime of life. I might add it is the killing-off of the most *courageous and useful* young men the world can produce; and the responsibility, as hinted at above, of having this awful carnage continue, rests on the shoulders, more or less, of every one of us.

Here is something from the *Independent Farmer* along the same line. With what a fine piece of sarcasm they dignify the killing business as a new "industry"!

THE EUROPEAN KILLING INDUSTRY.

The war in Europe is now reaching out toward the two-year mark. Its murderous ramifications now embrace the earth, sky, sea, and subsea. Its industrial and commercial phases and requirements reach to the ends of the earth, and influence the labor and culture of all civilized nations. The war has been so insistent, so steady going in its homicidal enterprises, that the world has come to regard it somewhat as a great industry, not of mining nor of commerce, but of killing. We have become so habituated to the tragedies of this war that any sudden termination of it would give the world something akin to an intellectual shock. The mood, the spiritual attitude would be voiced by the words: Is it possible? Can it be that those demon spirits that have been actuating the warring rulers of Europe

so long have loosed their grip on the mentality of those kaisers and czars and kings and sultans, and that reason has once more been enthroned in the seats where wars are made? There is little doubt that when the end of the war appears it will come upon us suddenly and from an unexpected source.

PREPARING FOR WAR TO PRESERVE PEACE.

We clip the following from the *Christian Herald*, written by Rev. R. C. Helfenstein, pastor of the First Christian Church, Urbana, Ill.:

I believe our nation had a thousand times better make an appropriation for a billion dollars to relieve the suffering millions in Europe today than to spend a billion dollars in preparation for human destruction. I believe America had a thousand times better spend a billion dollars in seeking to promote peace than to spend it in seeking to prepare for war. Suppose we spend a billion dollars in building battleships that are superior to any owned by England or Germany. Those countries would not rest until they had built ships just a little superior to ours, and equipped them with guns that would carry just a little further than ours, and so the game would continue indefinitely. As long as preparedness for war is in vogue, no nation is going to rest until it outdoes the others in efficiency of armament, and hence there will be no rest. Wars and rumors of wars cannot cease so long as nations follow the damnable policy of preparing for war to preserve peace.

# POULTRY DEPARTMENT

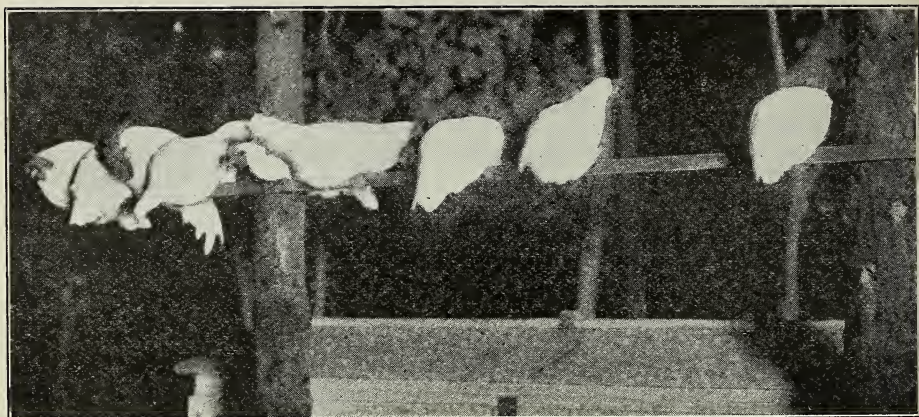
God blessed them, saying. . . and let the fowl multiply in the earth.—GEN. 1:22.

AN OPEN-AIR "SLEEPING-PORCH" FOR CHICKENS; MY CHICKEN STORY.

For several years past there has been much talk and quite a little excitement about sleeping outdoors in wire-screened sleeping-porches; and a lot of good people sleep practically out of doors in winter as well as in summer, even up here in the North, where we have zero weather; and I believe the general agreement among doctors and everybody else is that outdoor air is of great benefit. Of course elderly people as a rule cannot stand as well the outdoor sleeping-porches in the dead of winter; but the whole wide world has, I am sure, been greatly benefited by what has been said and done about outdoor air, especially during the hours of sleep. There is one queer thing about it that I have never been quite able to understand fully. If I sit down by an open window, especially with my back turned toward the breeze, I am sure to catch a cold. We are told that a "draft," especially on the back of the neck, is apt to do harm. But when one is right out in the wind no harm comes at all. I remember reading about a man who

camped out in California. As long as he slept outdoors on the ground, no matter how cold and windy, he was all right; but when he slept indoors, even with the windows and doors all open, he caught cold, because indoors there was a "draft," or what people *call* a draft; but right outdoors, say on top of a hill, there is absolutely no such thing as what people call a draft. I can remember the time when doctors told their patients that the "night air" was bad and unwholesome, and advised them to shut every door and window. Yes, I have a few times been obliged to sleep in rooms with every door and window closed because the other occupants of the room could not stand a bit of draft; and it was down in Florida, too, but it was years ago. I have been in church when the doors and windows were all shut tight because some old "granny" couldn't stand the breeze. Well, the whole wide world is "getting wise," at least I hope so, on the importance of outdoor air.

Does some one say, "I thought by the heading that this was going to be a chicken story"? Well, friends, we have just got to the point. I have been telling you all along about the Lady Eglantine chickens. Well,



My "outdoor sleeping-porch" for the Eglantine chickens.

when the hot weather began to come on, they protested against being obliged to sleep in the little poultry-house you see in the picture. They wanted to climb up among the evergreen and maple trees; and some of the enterprising pullets did get away up in the tree-tops. I finally caught them and clipped one wing close, besides clipping the lower branches of the trees, so that the fowls could not roost any more in the tree-tops. Then they got on top of their domicile, and looked so longingly for a branch of a tree that they could reach in spite of the clipped wing that I felt sorry for them. I nailed a pole across just high enough to enable them to hop up on it; and one dark night when they had settled down for their snooze in the open air, Huber, by means of a flash-light, photographed the whole "happy family." The big rooster, four and a half months old, evidently did not wake up. Some of the younger pullets opened their eyes, as you see.

Now, friends, how many of you are keeping your chickens under cover during this hot July and August weather when they would be a thousand times better off in the open air? Don't you believe you would get more and better eggs and more chickens, and better chickens, by having a special sleeping-porch for the chickens, as well as one for yourself? Read that first chapter of Genesis, and see how many times mention is made of the "fowls of the air." When it comes toward zero weather up here in the North, very likely they need shelter to prevent freezing the combs. My experience is that, when the fowls have been accustomed to roost outdoors, say in trees, they are loath to go back inside, even when freezing weather comes; but by taking a little pains this can be easily managed.

The spikes that hold the pole are not driven clear in. When the nights become too frosty I propose to take the pole down and teach them to roost inside. When you are traveling again, just take a look at the poultry-houses everywhere. Many of them have glass sashes, which may be all right here in the North for winter, but just see how many houses you can find with glass windows all in place, *all summer long*. By the way, the same thing is true more or less with our stables for horses and cattle. Windows are splendid things in cold weather; but when July and August come along, for humanity's sake *do* pull every window *clear out*; even if storms do beat in a little during the summer time, the harm they do does not begin to counterbalance the lack of abundance of good air. I honestly believe a lot of the troubles with poultry, horses, and cattle, and perhaps pigs also, are the outcome of poorly ventilated sleeping arrangements. See how happy those chickens look on that pole. I can go up in the evening and pat them on the back, and say "Good biddies," and they give me kind words in their own language in return. There are two pullets that will be five months old the first of September. Today is Aug. 23. They have big red combs, and they are singing every day as if they contemplated laying eggs. Don't you believe the outdoor air during these hot months helps them to think of laying eggs? Let me digress a little.

Years ago one of my most intimate friends was a beekeeper by the name of Blakeslee. We used to do a lot of visiting

\* Later, Aug. 29.—I hold in my hand a little egg weighing  $1\frac{1}{2}$  ounces, just laid by one of my "Lady Eglantines." As nearly as I can figure she will be five months old Sept. 1; so she laid her first egg when 4 months and 29 days old. There is one more



back and forth. He bought my big wind-mill years ago, and paid me for it in bives of bees. Well, one of his daughters is not a beekeeper, but she is a "chicken woman." She has now something like 2000 Leghorns, big and little, and 900 laying hens. These laying hens are shut up in rather close quarters, and never get out to have the run of the farm—that is, after they commence laying. No males are permitted among her laying hens. Miss Blakeslee has one

# A GLIMPSE OF THE CHICKEN BUSINESS AND GARDENING DOWN IN FLORIDA IN JULY.

The letter below is a rather long one, I admit; but so many people are wanting to know about Florida in summer time, especially in regard to chickens, gardening, etc., I have thought best to give it entire.

Mr. A. I. Root:—The last issue of GLEANINGS has just arrived. I was much interested in reading about your little Eglantines, and had been wondering how they were coming on. I am glad you are having such good luck with them. I used to be very enthusiastic over White Leghorns; but as I am not as spry as when younger, and have a lame back, my enthusiasm has waned. A chicken that is easy to handle, and that will "stay put" suits me better now, so I have taken up the Buff Orpingtons and like them first rate. They are quiet, and good layers. I am trapping a pullet that I call "Lady Valentine" because she laid her first egg on Saint Valentine's day. She has now, in a little over five months, laid one hundred and twenty-five eggs, and is still pegging away; so it looks as if her year's record were likely to be pretty good.



Baskets that brought the nine chicks from Bradentown, Fla., to Medina, Ohio. Three of the chicks were four weeks old, and the other six only one week old.

pullet that began to lay, I think, when it was only four months and five days old. Well, as many pullets begin to lay when four or five months old, how old must a brother of hers be in order to do his part in the way of "replenishing and multiplying" the "fowls of the air"? This was a query; so I purchased two two-year-old hens of Miss Blakeslee, hens that practically had never seen a male bird since they began to lay. I put the two hens among the Eglantines. They are close to that young rooster there on the perch. You will notice they are apparently "good friends." At this date they have laid 15 eggs, and these 15 eggs are under a sitting hen. When she has had them five days I can tell whether they will hatch or not. If it were not counting chickens before they are hatched I might go on and tell you that I am planning to ship the whole outfit, chickens and all, down to Florida about the first of November. Meanwhile some veteran poultryman might tell me if chickens from those two old hens mated with that cockerel, four and half months old, will produce good strong chickens.\*

pullet of the same age which I expect to lay soon. Of course I shall keep a record of the eggs laid by each of these two pullets, and we shall soon know if she promises to be a "chip of the old block."

Still later, Sept. 5—The companion to the pul-

doing finely so far, tho I believe July is considered the least favorable month of the year for raising little chicks in Florida. I feed plenty of thick sour milk, and that helps wonderfully to keep them healthy and growing. I suppose the greatest danger that threatens them is that they may get beaten down in one of our dashing summer rains some time when I am not around to hustle them under shelter. I am getting quite a few eggs now from my early spring pullets. I have thirty that were hatched February 3, so they are not six months old yet, but nearly half of them are laying. One began when she was just four months and eighteen days old; several others when they were about five months. I have never had pullets of any of the large breeds reach maturity quite as soon as these. Their mother did not lay till they were seven months old. I attribute their early development to special care in raising them. One thing in particular was—no crowding. I weeded out the cockerels for eating purposes when they were from two to three months old. Then the hens have scarcely known what it was to feel hungry. Plenty of

let mentioned has also commenced laying, as has also one of the pullets hatched three weeks later; or, in other words, this last-mentioned pullet laid an egg when four months and eight days old; and not only that she laid an egg the next day, and still another the third day, and just now promises to lay an egg every day. Of course, the egg is small, but it is an egg. Just one thing more: This pullet has a comb so large, standing straight up, that I feared she was going to be a rooster; and, in fact, she looked like a rooster as she sat there on the nest. Her juvenile cackle (no "rooster") when she comes off the nest is genuine "music" to your old friend A. I. Root.

\* I am sorry to tell you that the sitting hen I put on those fifteen eggs proved to be unfaithful to her task, and not an egg turned out fertile. But in a second setting of 13 eggs, every one proved fertile, so my 5-months-old cockerel is O. K. so far.

grain and green stuff and milk, and a dish of dry bran was kept before them all the time to pick at in their leisure moments.

In a recent copy of the *Rural New-Yorker* I notice they recommend feeding moist mashies to hasten maturity in pullets. It has always been a hobby of mine that young chickens thrived best on dry feed entirely; but judging by these Orpington pullets I rather think there is a little something in the mash theory; for when they were small, and till they were perhaps three months old, I was very busy with my farm work, and my wife took charge of feeding them. Contrary to my advice (you know women will do as they please sometimes), she literally stuffed those chickens with mash "because they loved it so." She said I needn't worry about its hurting them any, and it seems it did not. Not a chick was sick, and the only loss was three captured by a hawk. They surely did grow fast. The cockerels weighed nearly three pounds in less than three months, and a pullet laid in less than five. It looks as if the joke was on me. Nevertheless, I still maintain that such treatment would not do for Leghorns, and may be it was only mixing the mash with sour milk that preserved the Orpingtons from acute indigestion.

I see you are raising corn and velvet beans on your Florida land this year instead of feterita, etc. Well, so am I. Last summer my Egyptian wheat, chicken corn, and feterita grew to perfection, making a magnificent crop of heads, and I thought I was going to have an abundance of feed for my poultry; but my experience was similar to yours—the birds did the harvesting. As soon as it started to ripen, the blackbirds came in flocks and droves and stayed till it was gone. I managed to get a few heads by cutting them before they were ripe; but of course that was not much good, so the whole thing was practically a failure, and I made up my mind quite emphatically that this year I would raise something they could not get. I have fifteen acres of velvet beans and eight acres of corn. The beans crushed make a good chicken feed. If there is a mill handy to you in Bradentown you might try some of them next winter. Mine are mostly the Chinese variety. They grow in such big clusters that they are easy to gather; and when I have picked what I need I shall turn my hogs and cattle in to finish the job. I planted velvet beans in my cornfield in the row with my corn, and now they have climbed to the tops of the tallest stalks and have yards of vines waving around up there looking for new worlds to conquer.

We are having plenty of rain here this summer, and things are growing finely. I am going to have a fine corn crop, and my cassava, chufas, Japanese sugar cane, etc., are all looking well.

I must tell you a cassava story that amused me very much. One day last spring I had a long root of it lying on the back porch, which I was showing to a friend from the North.

"My," he said; "I wouldn't want to plant any of that stuff. Think of having to dig down into the ground six or seven feet to get out a crop! How in the world do you ever manage it?"

He was quite relieved when I explained to him that cassava roots have the obliging habit of growing horizontally a few inches under the ground instead of vertically.

Your great-granddaughter surely takes a good picture. She is a mighty bright-looking baby for only eighteen days old, and you can't be too proud of her. Dade City, Fla., July 24. C. H. TIDD.

There are several points in the above letter that interest me greatly, especially the matter of getting pullets to laying when only five or six months old. I have repeatedly hatched chickens almost every winter

month; but so far as I could discover none of them began to lay until they were pretty well toward a year old.

In regard to the feterita, we had a great crop; but the birds had gathered every seed before I got there except a few heads that were gathered and stored away until I got around. And a blight of some sort killed most of the second growth, so we had quite a job of turning the great mass of stalks, some green, and some dead and dry, under the ground. Indeed, it was a benefit to apply this humus, but nothing like the velvet bean or some other *legume*.

#### A. I. ROOT, JR., AND SOME OTHER THINGS.

The readers of *GLEANINGS* may not all be aware that there is another A. I. Root "coming on." This younger A. I. Root is now eleven years old, and he goes around with his father, E. R. Root, when the father lectures on bees. The son assists also in the handling of bees before the audience. With the above explanation the following letter to Alan I. Root will be understood:

To Master A. I. Root, Jr.:—The boys and girls of Empire School have become exceedingly interested in bees. At least two boys have been promised the chance to raise bees this summer at their country homes, and they hope to handle them as did the little Medina boy they saw exhibiting bees.

Three different times the teachers have had tiny soda biscuit and honey for the noon lunch; and a certain home in Lakewood is to include honey on the bill of fare.

Miss Dawson and myself, who are the science teachers, hope by another year to install glass hives, such as your father spoke of, in Empire School. Miss Dawson was very sorry not to meet your father personally. Her grandfather was in the bee business years ago, and her father was one of the earliest subscribers to the "Bee Man." Miss Dawson's sister is trying to make Cleveland a "flyless" city. Doubtless you have heard something about her efforts, and really she has almost accomplished her purpose. Isn't that wonderful!

You chose a very fine gentleman to be named after. Much of the best there is in Medina is directly due to your grandfather. That you will know by and by.

With best wishes for your happiness and success,  
MARY C. PHILLIPS.

Empire Junior High School, Cleveland, O., May 20.

It was my pleasure a few days ago to meet the good lady who has been the moving spirit in banishing flies from the great city of Cleveland; and, if I mistake not, she has not only (thru the *press*) extended her crusade to the surrounding homes but to surrounding farms in the country.

We have been having the hottest July and August I think I ever witnessed, and hence the weather has been unusually favorable for the propagation of flies; but there are fewer flies in and around our



home, and I think I may say in the office too, than I have ever known before. The fly crusade is proving to be a success. Just

consider for a moment what one woman can do when she has an inspiration; and she is not a very big woman after all.

## TEMPERANCE

### MOB LAW AND THE SALOON BUSINESS AT LIMA, OHIO.

On this first day of September the papers are printing big headlines in regard to a mob of about 3000 that stormed the jail at Lima, Ohio, because a big colored man assaulted a young wife, slashing her with a knife, and because the sheriff refused to tell them where to find the culprit whom he had taken prisoner. They put a rope around his neck and threatened to hang him. See the following from the *Plain Dealer*:

LIMA, Aug. 30.—Sheriff Eley, who escaped the mob, was found hiding in the Elks' home. He was taken to the principal street corner by 1000 blood-crazed men, a rope placed around his neck, and the end thrown over a street-railway pole. The mob threatens to hang Eley unless he tells where the negro is hidden. Efforts of police to reach Eley were futile.

The mob cut the trolley rope from an interurban car and knotted it about Eley's neck. Police are powerless. Chief McKinney has called on all citizens to join his forces, but no one has responded.

If I am correct, this good sheriff refused to hand over the prisoner to a crazy mob, even tho his refusal might cost him his life. Read the following:

Doris, four years old, daughter of Sheriff Eley, died in the city hospital tonight. The child, seriously ill last night, was carried from the sheriff's house when part of the mob went thru the building in search of the sheriff. She died this evening with her bruised and battered father at her bedside.

A sister of Mrs. Eley, a nervous wreck as a result of the violence, is in the same hospital.

#### SAY GRUDGE WAS REASON.

Lima officials without any equivocation charge the roughest element of the city with making yesterday's assault on Mrs. Vician Baber by a negro giant an excuse to settle a grudge it has borne Sheriff Eley for a year. County Prosecutor Ortha O. Barr has a list of nearly fifty of the ringleaders of that drink-inflamed mob that wanted to lynch the negro, and then wreaked its vengeance on the sheriff who foiled its plot.

Swift retribution is promised the ruffians who broke into the jail and dangled the naked sheriff at the end of a rope because he would not reveal the hiding place of Charles Daniels, the herculean assailant of Mrs. Baber. Prosecutor Barr will submit his list of names and full details of the orgy to the grand jury next Tuesday.

Mayor Bayliss Simpson and Chief of Police Rollie H. McKinney corroborate the assertion of Prosecutor Barr that the attack on the sheriff was the culmination of a year of persecution following Sheriff Eley's appeal to the militia to stop a prize fight in Lima last Labor Day. Both the mayor and the chief of police have assured Prosecutor Barr they will back him to the limit in his determination to punish the ring-leaders.

There are several things in the above to which I wish to call attention. First, if I am correct this same crazy drunken mob lynched a negro some time ago. Second, it was not their righteous zeal to avenge the wrong suffered by the young woman so much as it was to vent their spite on this righteous and courageous sheriff. About a year ago he was instrumental in stopping a prizefight that was going to be "pulled off" by this same crowd. The county prosecutor tells us there were nearly fifty "drink-inflamed" ringleaders, and things were in such a wretched state of affairs at Lima that a crowd estimated at 3000, full of drink, followed the drunken rabble. I do not know how many saloons are now running in Lima. When the trouble first started, somebody had sense enough to order the saloons all closed. I do not know whether the order was really *carried out or not*.

Just one thing more. There were two saloons in the city that were run by negroes. If any town or city permits colored men to run a saloon, selling to black or white or anybody else, is it anything strange that a colored man, crazy with drink, should assault a defenseless white woman? Nothing is said in any of the papers, so far as I can gather, about going to the bottom of the matter, and closing the saloons, *for all time to come*. The order was given to close the saloons *after* the drunken mob got under way; but it did not seem to occur to anybody that the saloons running day and night, full blast, would, as a matter of course, bear just such fruit as Lima is now gathering. Has not the prohibition wave reached Allen Co.? and is it not about time that she decide, like the rest of the world, that it is the *saloon* that is the real guilty party—not the negroes nor the Indians, nor low-down white men? May God help us.

"MOB TONIC;" SHALL OHIO CONTINUE TO SUPPLY IT?

After the above was in print I found the following in the *American Issue* for Sept. 8. Notice the concluding words:

#### LIMA MOB STARTED FROM A SALOON.

According to press reports, it was a liquor-inflamed mob which disgraced Lima last week, and which resulted in the sheriff nearly losing his life, and in the death of the little daughter of the sheriff from the shock of the mob's attack on the jail to get a prisoner to lynch him.

Dispatches are to the effect that the nucleus of the mob was formed in one of Lima's "respectable" licensed saloons, and that the drinking of liquor nerved the men for their lawless act. The evening of the day following the work of the mob, the saloons of Lima were closed at 6 o'clock to prevent further trouble.

This is the first work of an Ohio mob since last January, when drink-crazed men burned and looted East Youngstown and destroyed a million dollars' worth of property and killed several persons.

John Barleycorn is right on the job when the mob plans its lawless deeds, and the booze demon gloats over the havoc for which he is largely responsible.

The tragedy at East Youngstown last January, and the inexcusable action of the mob at Lima last week, furnish two more cogent reasons why Ohio should rid herself of this mob tonic.

#### THE CONSUMPTION OF LIQUOR; IS IT ON THE INCREASE OR DECREASE?

So many statements are made in *some* (?) papers to the effect that the consumption of liquor is on the increase I thought best to refer the matter to the General Superintendent of the Anti-saloon League, and here is his reply:

*Dear Mr. Root:*—All the *Vindicator* says may be true, which does not mean anything, for these reasons: First, when liquors are withdrawn from bond they appear on the Internal Revenue Report as "consumed," while they may not be consumed at all. They may be withdrawn and placed in warehouses for various reasons, as is often the case. But the Internal Revenue Department puts this down at once as *consumed* because the Internal Revenue Department cannot follow them to their ultimate destination. There may have been an exceptionally large quantity, as is often the case, withdrawn in that particular month.

Second, it may be possible in the consumption of beer that May showed an increase. The great munition factories that are running full heat, and employing hundreds of thousands of men at large wages, many of whom are drinkers, may have consumed a good deal of beer during that month. It should be remembered, however, that there was a decrease in the consumption of beer last year of about two million barrels, and this supposed increase is not an increase over the original amount consumed, but an increase over that consumed last year, which was a great decrease over preceding years. These things fluctuate when regarded by the month. It is year by year that shows the steady throttling of the traffic.

P. A. BAKER, General Superintendent  
Anti-saloon League.

Westerville, O., Aug. 18.

In addition to the above I think I have seen it stated that large amounts of alcohol are now being used in the manufacture of explosives for the "war industry," and that this has been counted in with the consumption of liquors as a beverage. The finances of the various breweries as given in our newspapers indicate also that the booze "industry" is on the decline.

After the above was dictated we found the following, which I clip from the *National Daily* for Aug. 21:

#### SLUMP IN LIQUOR CONSUMPTION.

WASHINGTON, D. C., Aug. 19.—The liquor-revenue collections for the fiscal year 1916, exclusive of

emergency revenue, shows a decrease in receipts on beer of \$1,155,327.35 as compared with the previous year. This is according to the preliminary report of Internal Revenue Commissioner Osborne.

According to the Commissioner's report, there was produced, during the past year, 32,613,050 gallons of denatured alcohol, used exclusively in the arts, industries, and for scientific purposes, of which 19,666,901 gallons were used in the manufacture of munitions and smokeless powder.

It is estimated by experts who have examined the preliminary report of the Internal Revenue Commissioner that the full report will show that the amount of whisky consumed for beverage purposes the past year is 1,609,343 gallons less than the amount consumed in the fiscal year of 1915; while the slump in the consumption of beer in 1916 as compared with 1915 is 1,182,193 barrels.

#### ALMOST A MILLION DOLLARS' WORTH OF LIQUOR DESTROYED.

We clip the following from the *American Issue*:

Girard is a little town along the Georgia-Alabama border. Liquor producers piled booze into the town, expecting to ship it over all the dry territory. But the dry laws of Alabama and Georgia interfered. It is estimated that nearly one million dollars' worth of liquor was stored in the town. The judge ordered the stuff destroyed, and every day a deputy sheriff and a posse of men have been engaged in smashing bottles and emptying kegs.

It is estimated that \$300,000 worth of intoxicants was poured into the river in one day. An attempt was made to stop this wholesale destruction of the liquor, but the judge ordered the officers to proceed. Some of the fellows engaged in handling the stuff are being handed out heavy sentences. C. G. Phelps was fined \$2500 and sentenced to three years in prison. Benjamin Edwards was fined a like sum, and sentenced to prison for 30 days.

If this kind of work continues, the liquor people had better pack up and retire as quickly as possible.

Here is something more from the *American Issue*, along the same line:

#### TRYING TO ESCAPE THE STORM.

Philadelphia saloonkeepers are alarmed at the tidal temperance wave which is sweeping the country, and 240 of them want to quit the business. Dispatches say that more than 1000 saloons throughout Pennsylvania are on the ragged edge, and are seeking customers. Real-estate brokers making a specialty of handling this class of property are loaded down with lists. What is worrying the saloonkeepers of Philadelphia is the probability of the coming legislature enacting a local-option law.

#### "GOD'S KINGDOM COMING."

We clip the following from the *Youth's Instructor*:

When the province of Ontario goes dry September 16, by act of the provincial legislature, Toronto, with 400,000 population, will be the largest dry city in the world.

One of our office force informs me that he was in Toronto only a few days ago; and he said the whole great city was actually busy in "preparedness" for the coming temperance victory. He says he met one man who said something like this: "It is



true I have been drinking more than I ought to; and I, for one, am 'confounded' glad of what is now coming."

"FORTY DISTILLERIES AND A DOZEN COTTON-MILLS;"  
NOW, "SIXTY-EIGHT COTTON-MILLS, NO  
DISTILLERIES."

For many months I have been reading your temperance articles in GLEANINGS, and enjoy them very much. I want you to see what has been done in this county along that line. I am enclosing you a small folder showing the advancement that Gaston County has made. I am a young man, but I can remember when Gaston Co. had more than 40 distilleries and a dozen cotton-mills. Today this county has 68 cotton-mills and, of course, no distilleries.

Gastonia, N. C., Feb. 23. J. L. BEAL.

We clip as below from the folder:

Indeed, the old order of things has changed. Less than 34 years ago the good old home-grown "corn liquor" whose excellences of quality one so often hears extolled, flowed, almost as free as water, in the valleys and on the hills of Gaston. It was made on the banks of every stream, and was dispensed at the rate of "all you can drink for a nickel" at almost every cross-roads grocery in the county. Today you can't legally get a nickel's worth "for love or money."

"LOOK AT THE MONEY THAT WAS IN IT."

I presume our readers have noticed a statement in the papers to the effect that a fiend in human shape in New York has confessed to being instrumental in getting *hundreds of young girls* into the white-slave traffic. The clipping below from the *American Issue* gives us the particulars:

The New York *Evening Sun* of August 16 recounted how Yushe Botwin, seated in the center of a circle of newspaper men in the private chamber of District Attorney Swann, told his amazing tale of his life in the underworld. The story was so startling as to cause District Attorney Swann to exclaim:

"This man has told me a story which amazes and shocks me, and I am frank to say that I did not think anything so terrible could exist in this city."

The *Sun* said:

"Throughout his entire story the feeling of Botwin that the District Attorney had done him an irreparable injury to deny him the means of a livelihood was apparent. The question of right and wrong has never entered his mind. His arrest, he thinks, was a great injustice, and should never have taken place. "Did it never enter your mind what a great wrong against society you were doing, and how you were deliberately ruining the lives of hundreds of innocent young girls?" Mr. Swann asked the prisoner.

Botwin shrugged his shoulders, and with an amazed look on his face, as tho that were an entirely new idea, said: "Look at the money that was in it."

The liquor interests rest their claim for existence exactly upon that same foundation—the money that is in it. "Great is Diana of the Ephesians!"

White slavery and the liquor-traffic travel hand in hand.

The above holds up to the whole wide world the real attitude, not only of the white-slave traffic, but of the entire liquor-traffic, in a way I have never seen it before. This fellow, after his confession, seemed to think the "big money" that was to be made in the business was a sufficient *excuse* for entrapping and debauching and sending down to ruin innocent young girls—just such girls as we have in our own homes. If there ever was a human being on the face of the earth that is not fit to be permitted to live another twenty-four hours, it is this fiend in human shape who gave as an excuse or as a plea for letting the business continue, "Look at the money that was in it."

# HIGH-PRESSURE GARDENING

### BEES AND "GRAPE JUICE."

There has been a good deal said about the importance of bees to fruit-growers; but I have never before seen an intimation to the effect that bees were in a like manner an important adjunct to a good crop of grapes. I clip the following from the *Florida Grower*:

#### BEES HELP POLLINATION OF GRAPES.

Having heard many complaints as to Muscadine type of grapes not bearing well, and also having numerous failures ourselves here at Oneco, I wish to state to the readers of the *Grower* that I think the matter is easily solved. It is not the lack of pollen only, but lack of a carrying agent; and where bees are kept the grapevines are annually loaded with fruit; where there are no bees, the vines have very few or no grapes.

It is absolutely necessary, we have decided, to keep bees near grape-arbors if one expects to get any fruit regularly, so we have invested in a lot of bees, having seen our neighbors with bees enjoying a big

crop of grapes every year. The Mish grape now ripening is the earliest of the Muscadines, and to our personal taste the finest grape that grows—vines simply loaded down, with bunches up to 20 or more grapes each, perfectly sweet and delicious. Now we know that bees insure a crop of grapes, there is apparently no reason why all these various Muscadines cannot be grown in enormous quantity all over Florida and the South.

E. N. REASONER.

I am very glad indeed to get the above, especially as it comes from such an excellent and reliable authority as our good friend E. N. Reasoner, of the Oneco Nursery. So far as I know, grape-growing has not assumed such importance in Florida as to grow grapes enough to furnish the grape *juice* that is now getting to be such a staple article all over the great wide world. May God *hasten* the time when fruit juice and milk will take the place of beer and other intoxicants.

## THE AVOCADO (OR ALLIGATOR) PEAR.

On pages 170 and 171 of GLEANINGS for Feb. 1, 1915, I gave you quite a little in regard to the above fruit which is making so much of a stir in California and Florida. The tree in California that was valued at \$30,000 is still bearing fruit and buds. From the *Good Health Clinic* I clip the following statement from an address delivered by the Governor of New York.

Flynn tells us that we would live forever if we ate the avocado (alligator pear) every day, because it gives us meat, vegetable, and fruit combined; but that is rather begging the question, because there are not enough raised to supply one person in one thousand, and in the Northland they retail for \$6 to \$8 a dozen. There would be just as much sense in the Esquimaux telling us that we should all live upon whale's blubber.

From the quantity of fruit that had set on the trees when I left Florida toward the first of May, it looked to me as if the price would soon come down from what it had been. I hardly think our trees are large enough to bear fruit this year. The trees belonging to our neighbors, close by us, and across the way, were literally loaded down with fruit. Everybody seems to praise it. It is very likely, however, as suggested in the above, that nature provides, or at least provides within easy reach, the food that is particularly beneficial in any particular climate. I have often thought of this, when partaking of our delicious grape fruit that grows in such abundance right before the open door, that seems to be provided particularly to quench the thirst and give health and enjoyment to the people who live where frost and snow are almost entirely unknown.

## SWEET CLOVER TAINTING MILK AND BUTTER.

We clip the following from the *Country Gentleman*:

## SWEET CLOVER AND MILK.

We are learning new things about new and old crops all the time. Many growers claim that sweet-clover pasture will not affect the flavor of milk, but the subscriber who wrote the following letter knows that it did do it in at least one case:

"A year ago we planted a patch to sweet clover. As our winter oats froze out it was our earliest pasture, so we put our cow in this field. The clover tainted the milk, however, and I could not sell the surplus butter, as the customers did not like the sweet-clover flavor. We now have the cow in the woods pasture, and there is no unpleasant odor or taste to her milk or the butter.

"We put her on the sweet-clover pasture in the morning and kept her in the oats-field at night, and there was a vast difference in the taste of the morning and evening milk; now the taste is the same at both milkings.

"We will plant sweet clover again this fall, but not as a dairy feed."

The above is indeed a surprise to us. In all the reports we have had for years past

in regard to sweet clover for milch cows we cannot now recall ever receiving a word in regard to its tainting milk, and we must think this report is an exception to the general rule; and we are inclined to think, also, that there is a possibility that this sweet clover is peculiar, or that there is some other explanation for it. Will our readers report if they have ever had the same experience? We ask this because we have had so many reports favoring sweet-clover hay and sweet-clover pasture for both milk and butter.

## DANDELIONS AS A HONEY-PLANT.

You say dandelion is a great honey-plant. I have been looking it over of late years, but have seen but one bee on it. You must have a different kind of plant, or a different bee. Most of the bees about here are blacks or hybrids, and they do not bother dandelion at all.

I like your journal. I too am getting to be an old man. I am in my 70th year, and I have never been under the influence of strong drink, and I do not know what lager beer tastes like. I think any man that gets drunk has nobody but himself to blame. The saloon-keeper has no power to compel any one to drink his stuff.

I am a great-grandson of a private in the Revolutionary War. His name was Henry Jamison.

LEMUEL B. JAMISON.

Englishtown, N. J., May 8.

My good friend, dandelion, like almost all other sources of honey, has its off and on years; and I suppose locality has much to do with it. With us here, as it is about the first thing that the bees can work on most seasons, there is a great roar over the fields of dandelion. Sometimes the bees get only a little honey as well as pollen.

You are right, perhaps, in saying that "saloons have no power to compel," etc.; but the fact that they do by some means get hold of our boys and lead them astray is reason enough why they should be done away with.

We are glad to hear from a descendant of one of the heroes of the Revolutionary War.

## ANARCHY, RIGHT HERE IN OUR UNITED STATES OF AMERICA.

We clip the following from the *Youths' Instructor*:

During 1915 there were in this country sixty-nine lynchings, seventeen more than in 1914. In four cases it was later proved that the victims were innocent. Three of those lynched last year were women. Leading universities of the Southern states are starting a movement to put an end to this lawlessness, which is a disgrace to the country.

God hasten the time when law and order shall rule, and not crazy mobs that defy law.



## DANGER

### TREE DISEASE

IS  
PREVENTABLE  
BY SPRAYING  
**MYERS**  
WAY

## MYERS

### SPRAY PUMPS

FOR  
SPRAYING PAINTING  
OR DISINFECTING

To the man experienced in fruit growing Fall Spraying means healthy trees that will require but little more care the following spring. Fall is the season to successfully fight scale and similar tree diseases by spraying, and you want the best equipment obtainable for this work. MYERS will fill the bill, and whether your orchards are extensive or include but a few trees there is a MYERS OUTFIT that will just fit your needs. Myers Spray Pumps are also adapted for painting, disinfecting and similar work.

The Myers Line includes Bucket, Barrel and Power Pumps and Complete Outfits with such improvements as our patented easy operating Cog Gear Head on Hand Pumps and Automatic Pressure Controller on Power Pumps—You get these and many other exclusive features when you purchase a MYERS. Write today for large Catalog—It's free and a postal will bring it to your door.



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See new styles—unbeatable quality at manufacturers' money-saving prices. Cash or easy payments. We pay freight and ship within 24 hours. 30 days' trial—\$30 days' approval test, \$100,000 Bank Bond Guarantee. Write today. Ask for Catalog No. 416

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## "Best" Hand Lantern

A powerful portable lamp, giving a 300 candle power pure white light. Just what the farmer, dairyman, stockman, etc. needs. Safe—Reliable—Economical—Absolutely Rain, Storm and Bug proof. Burns either gasoline or kerosene. Light in weight. Agents wanted. Big Profits. Write for Catalog. **THE BEST LIGHT CO.**  
306 E. 5th St., Canton, O.

## QUEENS AT FIFTY CENTS

These queens are guaranteed to be as good as money can buy. They are bred by the same and with the same care as the high-priced ones. They are bred from imported mothers, the best in the world, and will produce bees that are the best for honey-gathering, gentleness, and not inclined to swarm.

|                 |      |      |       |       |       |       |
|-----------------|------|------|-------|-------|-------|-------|
| Warranted       | 1    | 6    | 12    | 25    | 50    | 100   |
| Select untested | .50  | 3.00 | 6.00  | 11.75 | 22.50 | 43.75 |
| Tested          | .65  | 3.50 | 6.75  | 12.50 |       |       |
| Untested        | 1.00 | 5.50 | 10.00 |       |       |       |
| Select tested   | 1.50 | 8.50 | 16.00 |       |       |       |

We guarantee that all queens will reach you in good condition, to be purely mated, and to give perfect satisfaction. All orders filled at once.

L. L. FOREHAND, FORT DEPOSIT, ALA.



## Prices Reduced for ... Rest of Season

For resisting foul brood no bee can be found that will excel ours. Requeen now while you can get them cheap.

## Three-banded and Golden Italian

|                 |        |
|-----------------|--------|
| Untested queens | 75c    |
| Tested,         | \$1.00 |
| Selected,       | 2.00   |

**W. J. Littlefield, Little Rock, Arkansas**  
Box 582

## Queens of MOORE'S STRAIN of Italians

### PRODUCE WORKERS

That fill the super quick with honey nice and thick. They have won a world-wide reputation for honey-gathering, hardiness, gentleness, etc. Untested queens, 1, \$1; 6, \$5; 12, \$9; 100, \$65. Select untested, 1, \$1.25; 6, \$6; 12, \$11; 100, \$75. Safe arrival and satisfaction guaranteed. I am now filling orders by return mail.

Circular free.  
Queen-breeder

**J. P. MOORE,**  
Route 1, MORGAN, KY.

## Please Notice Change of Prices of Leininger's Strain of Italians

We will sell untested Italian queens at 75 cts. each; six, \$4.50; tested, one year old, at 80 cts. each; six, \$4.80; tested, young, \$1.25; six, \$6.50. Breeders, \$10 each. We guarantee that all queens will reach you in good condition, to be purely mated, and give satisfaction.

Fred S. Leininger & Son . . Delphos, Ohio

## Classified Advertisements

Notices will be inserted in these classified columns for 25 cts. per line. Advertisements intended for this department cannot be less than two lines, and should not exceed five lines; and you must say you want your advertisement in the classified columns or we will not be responsible for errors.

### HONEY AND WAX FOR SALE

A No. 1 clover in 120-lb. cases at 8 cts.  
H. C. LEE, Brooksville, Ky.

In new 60-lb. cans, clover honey, 8 cts.; buckwheat, 7 G. H. ADAMS, box 184, Schenectady, N.Y.

FOR SALE.—Choice northern Michigan clover honey in new 60-lb. cans.

A. TIEN, Falmouth, Mich.

Buckwheat honey, comb and extracted; also clover extracted, 60-lb. cans.

E. L. LANE, Trumansburg, N. Y.

FOR SALE.—White-clover extracted honey in 60-lb. cans, two cans to a case.

ARTHUR NORBERG, Spring Valley, Ill.

Well-ripened clover and buckwheat honey in new 60-lb. cans—two cans to the case.

B. B. COGGSHALL, Groton, N. Y.

Choice new-crop white-clover extracted honey in new 60-lb. tin cans, the bargain of the season; sample, 10 cts. D. R. TOWNSEND, Northstar, Mich.

FOR SALE.—A1 sweet-clover honey in 60-lb. cans, two cans to a case, 7½ cts. per lb., f. o. b. cars.

JOE C. WEAVER, Cochrane, Ala.

Clover honey (1916 crop) of very heavy body—a fancy article. Write for prices and a 5-cent sample.

M. W. HARRINGTON, Williamsburg, Iowa.

FOR SALE.—Choice New York State clover honey in 60-lb. cans, two in a case, at 7½ cts. per lb., f. o. b. Delanson, N. Y.

FRANK C. ALEXANDER.

FOR SALE.—Clover honey of finest quality in new 60-lb. cans at 8½ cts. per lb. Also fancy and No. 1 clover comb honey, 4¼ x 1½ sections.

MARTIN CARSMOE, Ruthven, Iowa.

FOR SALE.—Fancy white-clover honey; extracted, 8 cts. by the case of 120 lbs. Also same in 2-lb. friction-top cans, 24 cans to the case, 10 cts. f. o. b. Falmouth, Ky.

VIRGIL WEAVER.

FOR SALE.—Extra-quality white-clover honey, 8½ cts. by the case of two 60-lb. cans. Ten or more cases, 8 cts. Six-pound can, postpaid, in second zone, \$1.00. EARL RULSON, Rt. 1, Amsterdam, N. Y.

FOR SALE.—Raspberry, basswood, No. 1 white comb, \$3.00 per case; fancy, \$3.25; 24 Danz. sections to case; extracted, 120-lb. cases, 9 cts. per lb.

W. A. LATSHAW Co., Clarion, Mich.

RASPBERRY HONEY.—Thick, rich, and delicious. Put up for sale in 60-lb. tin cans. Price \$6.00 a can. Sample by mail for 10 cts., which may be applied on any order sent for honey. Write for price on large lots.

ELMER HUTCHINSON,

Rt. 2, Lake City, Mich.

FOR SALE.—Beautiful white-clover extracted honey, left upon the hives until after the close of the season before extracting, then put up in new 60-lb. net tin cans. The fact is, we have studied out a system of extracted-honey production whereby exquisite quality is secured at the expense of quantity. Just a little more money will buy this rich, rosy, well-ripened stock than is required to buy "just ordinary" stock. Inclose 10 cts. in stamps for a large sample that costs us 25 cts. to send, and be convinced of the superior quality of this stock. Address THE BEEKEEPERS' REVIEW, Northstar, Mich.

New clover honey; comb runs from No. 1 to fancy, \$3.50 per case; No. 2, \$3.00 per case of 24 sections, six cases to carrier; extracted clover, 9 cts., two 60-lb. cans to case. H. G. QUIRIN, Bellevue, O.

### HONEY AND WAX WANTED

WANTED.—Comb, extracted honey, honey-dew, and beeswax. W. A. LATSHAW Co., Clarion, Mich.

WANTED.—Extracted honey in any lots. Send sample. THE HONEY KING, Mahanomen, Minn.—54982

WANTED.—Comb and extracted honey, in car lots and less carlots. J. E. HARRIS, Morristown, Tenn.

Beeswax bought and sold. STROHMEYER & ARPE Co., 139 Franklin St., New York.

WANTED.—Best grades of white-clover comb and extracted honey.

THE THORNILEY BROS. Co., Marietta, O.

BEEWAX WANTED.—For manufacture into Weed Process Foundation on shares.

SUPERIOR HONEY Co., Ogden, Utah.

WANTED.—Offer on ton lots of heavy-bodied white-clover extracted honey with sample.

J. B. MASON, Mechanic Falls, Me.

WANTED.—Comb honey; fancy and No. 1 qualities; 4¼ square by 1½ sections preferred. Also white extracted honey, carload or less; quality.

HOFFMAN & HAUCK, Richmond Hill, N. Y.

WANTED.—Ripened honey. For sale: improved farm cider-mill, third value, \$15; \$60 sugar-cane mill, \$15; \$2500 printing outfit; divided to suit. Specimens free. W. H. GARDNER, Roxabel, O.

### FOR SALE

Get our new Rubber Stamp and Label Catalog. ACME PRINTING Co., Medina, Ohio.

HONEY LABELS.—Most attractive designs. Catalog free. EASTERN LABEL Co., Clintonville, Ct.

SEND TODAY for samples of latest Honey Labels. LIBERTY PUB. Co., Sta. D, box 4-E, Cleveland, Ohio.

FOR SALE.—A full line of Root's goods at Root's prices. A. L. HEALY, Mayaguez, Porto Rico.

A Metz 2-cylinder runabout, good condition. How much am I offered?

J. E. FOWLER, Newfields, N. H.

Beekeepers, let us send you our catalog of hives, smokers, foundation, veils, etc. They are nice and cheap. WHITE MFG. Co., Greenville, Tex.

FOR SALE.—Cedar or pine dove-tailed hives, also full line of supplies, including Dadant's foundation. Write for catalog. A. E. BURDICK, Sunnyside, Wash.

FOR SALE.—Medium-brood foundation. 1 to 10 lbs., 52 cts. per lb. Up to 25 lbs., 50 cts. Up to 50 lbs., 48 cts.; 100 lbs., 48 cts., prepaid in La. Root's goods for sale. Beeswax wanted; 25 cts. cash, 26 trade. J. F. ARCHDEKIN, Bordlonville, La.

Spring-weaklings' long, good seasons' yields equal strongest. Why? Tiering-up destroys work incentive. Q.-C. hive's every super adjoins brood-nest—incentive always there, work while others loaf. Address WM. F. MCCREADY, Box 1, Estero, Florida.

THE ROOT CANADIAN HOUSE, 185 Wright Ave., Toronto, Ont., successors to the Chas. E. Hopper Co. Full line of Root's goods; also made-in-Canada goods. Extractors and engines; GLEANINGS and other bee-journals; Prairie State incubators. Get the best. Catalog and price list free.



FOR SALE.—Ten Woodman double-wall hives, with deep cover, chaff-tray, no frames, 10-frame size; hive has been used four seasons; one coat of paint will make them as good as new. Will sell the ten for \$8.00. EARL L. BAKER, Star City, Mich.

FOR SALE.—500 Page Kenkle comb-honey supers, 4¼x4¼x1, ¾, nailed and painted with holders, springs, and separators, used 3 seasons, in perfect condition, at 35c each; lots of 100 at 30 cts. B. F. SMITH, JR., Fromberg, Mont.

## PATENTS

PATENTS THAT PAY: \$625,812.00 clients made. Protect your idea. Send data. Advice and two wonderful Guide Books free. Highest reference. E. E. VROOMAN & Co., 834 F., Washington, D. C.

## REAL ESTATE

FOR SALE.—A nice twenty-acre farm with 100 swarms of bees, and large ginseng-beds; also 4800 pounds of extra-nice raspberry-clover honey. L. FRANCISCO, Mosinee, Wis.

Improved irrigated alfalfa ranch. Ideal climate, pleasant altitude, no better location for apitary. Thousands of acres near. Snap at \$10,000. Quick sale. C-14, care of *Gleanings*.

TENNY RIDGE COLONY.—Acre homes among the big pines of Florida. Daily mail and auto service between Arcadia and Fort Myers. Lots 152 x 297 ft., \$50.00. Address E. PERRY, Sec. Tenney Ridge Colony, Arcadia, Florida.

VIRGINIA, North Carolina, West Virginia, and Ohio farms at \$15.00 per acre and up; offer big value for the price. Best climate, markets, schools, and transportation. Good land and neighbors. Write F. H. LABAUME, Agr. Agt. N. & W. Ry., 246 Arcade, Roanoke, Va.

A small farm in California will make you more money with less work. You will live longer and better. Delightful climate. Rich soil. Hospitable neighbors. Good roads, schools, and churches. Write for our San Joaquin Valley illustrated folders free. C. L. SEAGRAVES, Industrial Commissioner A. T. & S. F. R'y, 1934 R'y Exchange, Chicago.

FOR SALE.—Four-acre grove. The best of fruit; one and two years' growth; 160 steps from depot; 3 miles east of Tarpon Springs, Fla.: 2 railroads east and west; 1 railroad north. All trains stop. substantial fence; 2 drive wells; house 18½ x 24 ft, 3 rooms; bee-house, 8 x 28 ft., shingle roof; silica mine near by; makes the best of glass. Good place for bees, chickens, or dairy; \$2000—\$500 down, the rest to suit at 6 per cent. Address REV. J. G. TETER, 2001 Oak St., Chattanooga, Tenn. After Dec. 1, Tarpon Springs, Florida.

## WANTS AND EXCHANGES

WANTED.—To furnish every beekeeper within 500 miles of Boise, Idaho, with the best and cheapest bee supplies on the market, *quality considered*. Send me your order or a list of your requirements for 1916. Our catalog and price list will be mailed to you free. Order early and get the discounts. C. E. SHRIVER, Boise, Idaho.

## BEEES AND QUEENS

Finest Italian queens. Send for booklet and price list. JAY SMITH, 1159 De Wolf St., Vincennes, Ind.

Italian queen-bees, \$1.00 each; tested, \$1.50. J. B. CASE, Port Orange, Fla.

Well-bred bees and queens. Hives and supplies. J. H. M. COOK, 84 Cortlandt St., New York.

FOR SALE.—Italian queens; untested, 50 cts. each. E. A. SIMMONS, Greenville, Ala.

Fine three-banded Italian queens. Circular and price list free. J. L. LEATH, Corinth, Miss.

Golden-all-over queens of quality. Untested, 75 cts.; tested, \$1.50. A. O. HEINZEL, Rt. 3, Lincoln, Ill.

FOR SALE.—Full colonies fine Italian bees at bargain prices. J. Y. TRIGG, Valliant, Okla.

FOR SALE.—Fifty colonies of bees at Albright, W. Va., on M. & K. R. R. C. F. WELCH, Albright, W. Va.

FOR SALE.—Untested golden Italian queens, 60 cts.; hybrid queens, 25 cts. each. J. F. MICHAEL, Winchester, Ind.

FOR SALE.—Choice Italian queens rest of season, 60 cts. each, or six for \$3.00, cash with order. EDW. A. REDDOUT, Lysander, N. Y.

Bright Italian queens for sale at 50 cts. each. Safe arrival and satisfaction guaranteed. H. K. TURNER, Rt. 4, Greenville, Ala.

Northern-bred Italian queens of the E. E. Mott strain; untested, 75 cts.; guaranteed, 90 cts. Send for free list. EARL W. MOTT, Glenwood, Mich.

FOR SALE.—500 colonies of bees; sweet-clover and alfalfa grow in abundance. For particulars address GEM STATE APIARIES, box 67, Rigby, Idaho.

FOR SALE.—300 to 500 colonies in A No. 1 condition in famous Hagerman Valley, where failure is unknown. Address J. E. HANKS, Hagerman, Ida.

Italian queens bred for their honey-gathering qualities. One, \$1.00; six, \$5.00. EDITH M. PHELPS, Binghamton, N. Y., East End.

ITALIAN QUEENS.—Golden or leather colored; 75 cts. each; \$4.25 for 6; \$8.00 per doz. Tested, \$1.50. NORDLING APIARIES, Button Willow, Kern Co., Cal.

Bright Italian queens at 60 cts. each; \$6.00 per doz.; \$50 per 100. Safe arrival and satisfaction guaranteed. W. W. TALLEY, Rt. 4, Greenville, Ala.

Five hundred dandy leather-banded Italian queens for September, at 50 cts. each. No better. J. H. HAUGHEV, Queen-breeder, Berrien Springs, Mich.

FOR SALE.—Golden Italian queens, select tested, \$1.25; tested, \$1.00; untested, 60 cts. each; dozen, \$7.00; select untested, 75 cts.; dozen, \$8.00; no foul brood. D. T. GASTER, Rt. 2, Randleman, N. C.

H. C. Short, queen-breeder, formerly of Winchester, O., is now with W. D. Achord, Fitzpatrick, Ala. We will appreciate the patronage of Mr. Short's customers.

FOR SALE.—Golden Italian queens that produce golden bees; for gentleness and honey-gathering they are equal to any. Every queen guaranteed. Price \$1; 6 for \$5. WM. S. BARNETT, Barnetts, Va.

Leather-colored "Nutmeg strain" queens, \$1.00; \$10.00 per dozen. Tested, \$1.50. Special price on large lots by return mail. A. W. YATES, 3 Chapman St., Hartford, Ct.

Vigorous, prolific Italian queens, \$1; 6, \$5. I am wintering a lot of fine tested queens for early spring delivery. Look for my ad't in April. A. V. SMALL, 2302 Agency Road, St. Joseph, Mo.

Southwest Virginia five-band Italian queens, the fancy comb-honey strain, gentle to handle. They will please you. Try one. \$1.00 each. HENRY S. BOHON, Rt. 3, box 212, Roanoke, Va.

Golden Italian queens that produce golden bees; the highest kind, gentle, and as good honey-gatherers as can be found; each, \$1.00; 6, \$5.00; tested, \$2.00; breeders, \$5.00 to \$10.00. J. B. BROCKWELL, Barnetts, Va.

Golden Italian queens, bred strictly for business, that produce a strong race of honey-gatherers. Untested queens, 75 cts. each; \$8.00 per dozen; \$60 per 100. Prompt service and satisfaction guaranteed. L. J. DUNN, box 338J, Rt. 6, San Jose, Cal.

**GRAY CAUCASIANS.**—Early breeders, great honey-gatherers; cap beautifully white; great comb-builders; very prolific; gentle; hardy; good winterers. Untested, \$1; select untested, \$1.25; tested, \$1.50; select tested, \$2.00. H. W. FULMER, Andalusia, Pa.

**FOR SALE.**—Italian bees, 1 lb. with queen, \$2.25; one-frame with queen, \$2.00. Queens, 75 cts. each. Safe delivery guaranteed; 30-page catalog with beginner's outfit for stamp. THE DEROY TAYLOR CO., Newark, N. Y. (formerly Lyons).

My bright Italian queens will be ready to ship April 1, at 60 cts. each; virgin queens, 30 cts. Send for price list of queens, bees by the pound, and nucleus. Safe arrival and satisfaction guaranteed. M. BATES, Rt. 4, Greenville, Ala.

**FOR SALE.**—Three-banded, hardy, northern-bred Italian queens, bred from the best honey-gatherers obtainable. Untested, \$1.00; select tested with wing clipped, \$3.00; also Goldens and Carniolans at same prices. F. L. BARBER, Lowville, N. Y.

My breeder, a daughter of one of Dr. Miller's best queens, is proving superior to any I have been able to procure. Daughters of this queen, untested, 75 cts. each; \$8.00 per dozen. J. I. BANKS, Dowlstown, Tenn.

Phelps' Golden Italian Queens combine the qualities you want. They are great honey-gatherers, beautiful and gentle. Mated, \$1.00; 6, \$5.00; tested, \$3.00; breeders, \$5.00 and \$10.00. C. W. PHELPS & SONS, Wilcox St., Binghamton, N. Y.

Queens for requeening. Best on market. One untested, \$1.50; 12, \$12.00; one tested, \$2.00; 12, \$18.00; one select tested, \$3.00; 12, \$24.00. Special low price on 50 or more. Write. Safe delivery and satisfaction guaranteed. THE J. E. MARCHANT BEE & HONEY CO., Canton, Ohio.

The Stanley Improved Cell-starting Hive and Queen-rearing Outfit, complete, \$5.00. The same with a choice breeder, \$6.00. Warranted Italian queen, 60 cts. each. Tested, \$1.00. Virgin, 25 cts. Choice breeding queens, \$2.25. ARTHUR STANLEY, 1907 Washington Blvd., Chicago, Ill.

**QUEENS.**—From a strain of Italians, wintered for thirty years in the foothills of the Adirondack Mountains out of doors. Hardy, gentle, industrious, and fine resisters of disease. \$1.00 each, or \$9.00 per dozen; also nuclei and full colonies.

CHARLES STEWART, box 42, Johnstown, N. Y.

**QUEENS.**—Improved three-banded Italians, bred for business, June 1 to Nov. 15, untested queens, 75 cts. each; dozen, \$8.00; select, \$1.00; dozen, \$10.00; tested queens, \$1.25 each; dozen, \$12.00. Safe arrival and satisfaction guaranteed.

H. C. CLEMONS, Rt. 3, Williamstown, Ky.

**TENNESSEE-BRED QUEENS!** My three-band strain that has given such universal satisfaction for over 40 years. Orders filled promptly or money returned by first mail. 1000 nuclei in use. Tested, in June, \$1.75; untested, \$1.00; in July, \$1.50 and 75 cts. Postal brings circular.

JOHN M. DAVIS, Spring Hill, Tenn.

HOLLOPETER's honey-gathering strain of Italians are now at their best. This strain has a record of 100 lbs. more honey per colony than the average colony. Safe arrival by return mail. Untested queens, each, 75 cts.; 10 for \$6.00, 20 for \$10.00. Tested queen, each, \$1.00. 1 lb. bees with queen, \$2.00. We are booking orders now for spring delivery. J. B. HOLLOPETER, Pentz, Pa.

**FOR SALE.**—Three-banded Italian queens and bees from the best honey-gathering strains obtainable. Untested queen, 75 cts.; 6, \$4.25; 12, \$8.00; tested queens, \$1.25; 6, \$7.00; 12, \$12.00. For select queens, add 25 cts. each to the above prices. For queens in quantity lots, or bees by the pound, write for prices. ROBT. B. SPICER, Rt. 181, Wharton, N. J.

Famous Howe's, Root's, Moore's, Davis' select strain of honey-gatherers, disease-resisting. None better for all purposes. Untested, one, 75 cts.; doz., \$7.50. Select untested, one, \$1.00; doz., \$9.00; ½ doz., \$5.00; tested, \$1.25; doz., \$10; select tested, one, \$1.50; ½ doz., \$8.00; extra select \$2.00. Bees by the pound, \$2.50 with queen. Honey crop short. Will have plenty of bees in June.

H. B. MURRAY, Liberty, N. C.

**PURE ITALIAN QUEENS.**—Golden or three-banded by return mail. All queens are warranted purely mated. They are large and long-lived. They have proven themselves highly disease-resistant in many localities. One select untested, \$1.00; 6, \$4.25; 12, \$8.00; 100, \$60.00. Tested, \$1.25. Bees by the pound, nuclei, colonies. Safe arrival and satisfaction I guarantee. Circular free.

J. E. WING, 155 Schiele Ave., San Jose, Cal.

**THE BARGAIN OF THE SEASON.**—Listen: *The Beekeepers' Review* for two years would be \$2.00; 10 three-banded Italian untested queens at 50 cts. would be \$5.00; total, \$7.00. Send us only \$5.00 and receive the *Review* for 1916, 1917, mailing you the back numbers for this year, and 10 untested Italian queens direct from our breeders in the South. Prompt delivery. To get this exceptional bargain, address all orders to THE BEEKEEPERS' REVIEW, Northstar, Mich.

**FOR SALE.**—65 colonies Italian bees, \$250; all in hives used about two years; 8-frame L., wired full sheets; combs enough for 30 or 40 colonies extra. These bees produced 60 lbs. of honey this year; beeway comb-honey supers for above hives, never used; new Root automatic reversible extractor, storage tank, feeders, queen-excluders; in fact, every thing a beginner would require; every thing good and up to date; honey enough on hives (white clover) to winter bees; no disease. Write if you mean business. M. E. BABB, Rt. 7, Xenia, Ohio.

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**WANTED.**—Position in a beyard in Porto Rico. FRED E. OSBORNE, Delanson, N. Y. Care of Frank C. Alexander.

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is the title of a little booklet, giving seven reasons, official and non-official, why it is the best time to spray. This booklet will be sent out by the B. G. Pratt Co., 50 Church St., New York, manufacturers of the well-known "SCALECIDE" at a very early date. If you are not on their mailing list, send them a postal today giving the number of your trees and your dealer's name and you will receive a copy free. Address Dept. 6.

**60-lb. Honey-Cans**

Good second-hand, fit to refill with honey for use again. . . .

For shipment from either Philadelphia or Medina, while stock lasts, 10 cases, two 60-lb. cans, \$4.00; 25 cases, \$8.50; 100 cases, \$30, delivered on cars or boat. These cans have been used once for honey and emptied, leaving a film of honey adhering to the inside, protecting the tin from rust. Well worth the price to anyone in need of cans. Send orders to

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Grasp the experience of others in beekeeping by reading the best that has been published. The pamphlets and books listed below compel interest. Place a X in the margin opposite the publication wanted.

- ☐ THE DEVELOPMENT OF THE APPLE FROM THE FLOWER. By O. M. Osborne. Here's the latest scientific information about why apple blossoms can not do without bees. Free.
- ☐ MY FIRST SEASON'S EXPERIENCE WITH THE HONEYBEE. By "The Spectator," of the *Outlook*. A leaflet humorously detailing the satisfaction of beekeeping. Free.
- ☐ CATALOG OF BEEKEEPERS' SUPPLIES. Our new complete catalog, mailed free to any address on request.
- ☐ THE BEEKEEPER AND FRUIT-GROWER. Do you know that bees are necessary in modern fruit culture? This 15-page booklet tells how beekeeping is doubly profitable to the fruit-grower. Free.
- ☐ SPRING MANAGEMENT OF BEES. The experience of some successful beekeepers on solving this perplexing problem. Price 10 cents.
- ☐ THE USE OF HONEY IN COOKING. Just the thing for the up-to-date housewife. Price 10 cents.
- ☐ BEES AND POULTRY, how they work together profitably for others—why not for you? Some valuable pointers on hens and honeybees. Free.
- ☐ HOW TO KEEP BEES. A book of 228 pages detailing in a most interesting manner the experiences of a beginner in such a way as to help other beginners. Price \$1.00 postpaid.
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## TRADE NOTES

### SECOND-HAND 60-LB. CANS.

Our supply of second-hand cans at New York has been disposed of; but we still have a good supply both at Medina and Philadelphia of choice cans suitable for use again in shipping honey. These we are selling at \$4.00 for 10 cases; \$8.50 for 25 cases; \$30.00 for 100 cases.

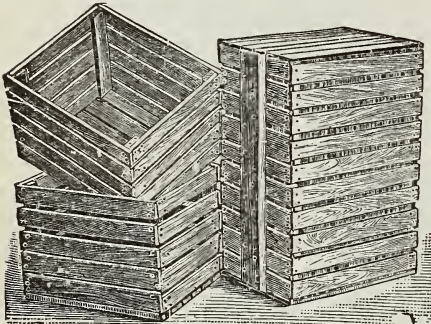
### NEW 60-LB. CANS.

We will still furnish, from Medina only, new 60-lb. square cans, 2 in a case, at the prices listed in our catalog—85 cts. per case; \$8.00 for 10 cases; 25 cases or more, at 75 cts. To buy new stock from the factories at prevailing prices we should have to pay 25 per cent more than they cost less than a year ago. If you need any, send us your orders.

### HOTBED SASH AND GLASS.

The season for using hotbed sash is approaching. We are prepared as usual with a choice grade of cypress sash which we will continue to furnish at former prices, viz., \$1.00 each, K. D.; \$1.75 for 5, or \$9.00 for 10. The regular size, which is furnished when no other is specified, is 3 1-3 feet wide by 6 feet long, made for four rows of eight-inch glass. Bars are grooved for glass to be slid in end to end. We also furnish them rabbetted for glass to be lapped and set in putty. If you prefer this style be sure to mention it in ordering.

Glass prices are greatly advanced, so that we must ask for 8x10 glass, \$3.50 per box of 90 lights.



BUSHEL BOXES.

We have on hand, ready for immediate shipment, a good stock of these boxes, packed as shown in cut. They are made with oak corner posts and bottom end slats to receive the nails, the remainder of the box being basswood. They are very convenient, and popular for handling potatoes, apples, onions, and other farm crops. They hold a heaped bushel level full, so they can be stacked any height desired. To reduce stock we offer them for a short time at the following special prices:

All slatted bushel boxes, per crate of 14, \$2.25

Slatted bushel boxes, per crate of 12, \$2.10

Galvanized bound boxes, per crate of 12, \$2.75

In lots of 10 crates or more, 5 per cent discount.

The all-slatted is the cheapest, and the most popular style. Two are nailed in each package, and sufficient nails are included for the remainder.

### EARLY-ORDER CASH DISCOUNT.

The usual custom of allowing a discount for early cash orders for goods for next season's use is continued this season. The discount begins with 5 per cent for September cash orders instead of 7, which was given in former years. The discount applies to the latest revised prices with the usual exceptions on certain classes of goods. No discount will apply on orders for shipping-cases, cartons, labels, tin and glass honey-packages, bees, queens, paint, bushel-boxes, hotbed sash, seeds, honey, and printed matter.

Where goods named in the list of exceptions form not more than 20 per cent of a general order for hives and other beekeepers' supplies, the discount may be taken on the entire order. The discount is allowed only for payment of cash during the month

of September, whether goods are shipped or not. For payment in October the discount will be 4 per cent; during November, 3 per cent; during December, 2 per cent.

### COMB-HONEY SHIPMENTS IN WESTERN TERRITORY.

Since the first of September all local or less than carload shipments of comb honey in territory west of Chicago and Mississippi River are rated double first class, making the shipping charges so high as to be almost prohibitive. When we learned some weeks ago that this change in classification had been made we gave notice of it in the editorial columns, suggesting that those interested should write to the chairman of the committee protesting the increase. We are now in receipt of a notice from the chairman of the committee, that, under docket No. 914, the Western Classification Committee will, on Thursday, Oct. 26, take up and consider a proposed change, making second-class rates apply on comb honey in less than carload lots, and fourth class in carloads. Interested parties desiring to appear and present argument will be heard at 3:45 P. M. in the committee conference room, 1336 Transportation Building, Chicago, Ill., on the date named. We plan to be represented, and suggest that concerted action by associations of beekeepers be taken, arranging with some one to represent their interests, to appear. This change, if it can be brought about, will mean thousands of dollars saved to the beekeepers in transportation charges on their product. This change cannot well be made soon enough to be of benefit on shipment this fall; but if we may look with hope for some relief for the future it will encourage some to continue producing comb honey who otherwise would give it up in favor of extracted.

THE A. I. ROOT CO., MEDINA, O.

## Special Notices by A. I. Root

### THE ANTI-SALOON LEAGUE YEAR BOOK FOR 1916.

I hold in my hands the above book of 310 pages. It gives correct statistics in regard to temperance and the use of intoxicating liquors covering the whole wide world. First an extensive account is given in regard to prohibition in Russia. The statements are from absolutely reliable sources; and after Russia a review is made of every nation in the world, noting both past and present conditions, and giving a birdseye review of the progress of temperance laws and temperance legislation. The above includes South America and American possessions not belonging to the United States. Then a vast array of facts is given in regard to the progress of each separate state of the American Union. Great numbers of wet and dry maps are given in order that one may note the astonishing progress, especially the progress being made at this time from wet to dry. For instance, Florida has only five wet counties containing saloons, and only nine towns or cities not under prohibition. Those of you who have been getting discouraged in regard to the slow progress of temperance had better have this book and look it over. Of course the liquor forces have published a similar book. I think they give it away, and there is scarcely a periodical now published that will accept statements from them, in defense of the liquor-traffic, unless it is a *paid advertisement*. Now, when somebody raises the question as to which is right, the liquor people or this year-book, call his attention to this fact:

The Anti-saloon League Year-book is gotten up by Christian people. It is the work of the churches and schools and colleges, and the physicians and scientific men of our land. Their evident desire is to benefit and uplift, not only our nation, but all the nations of the earth. In contrast with this I hardly need tell you the book put out by the liquor people is solely selfish. It is the inspiration of greed and avarice. They want to prevent their business or "industry" as they call it, from being driven entirely from the face of the earth. As a matter of course you can get their books free of charge; and they have millions of money, or at least they have just now, to push their hellish schemes. The Anti-saloon League tells us that *business men* everywhere have most cheerfully furnished facts and material for the book. The price in paper covers is 25 cents; bound in cloth, 50 cents. Address Anti-saloon League of America, Westerville, Ohio.